

Systemic Operational Design: Bringing Efficacy to the Operational Level of War

A Monograph

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ABSTRACT

SYSTEMIC OPERATIONAL DESIGN: BRINGING EFFICACY TO THE OPERATIONAL LEVEL OF WAR by Major Barrett Bernard, 68 Pages.

The premise of this monograph is that the Elements of Operational Design are incapable of linking the tactical employment of forces to strategic objectives and that Systemic Operational Design is a viable alternative. This monograph introduces the reader to Systemic Operational Design by providing an application of it to the Global War on Terrorism. The narrative generated by this application serves as a vehicle to explore the depths of Systemic Operational Design and enables a comparison to the Elements of Operational Design. Qualitative analysis of key points made in the narrative answers the monograph's research questions: First, given the failure of the Elements of Operational Design to produce a strategic victory in the GWOT, are they still relevant in the age of globalization? Second, is Mass a valid principle of war on the Twenty-first Century battlefield? Last, should terrorism be classified as an act of war or as a crime?

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INTRODUCTION

The operational level of war “links the tactical employment of forces to strategic objectives.”¹ Operational design provides, “the conceptual linkage of ends, ways, and means.”² The abject failure of the United States to translate overwhelming success at the tactical level (Operation Enduring Freedom and Operation Iraqi Freedom), into strategic victory in the Global War on Terrorism (GWOT) raises questions about the efficacy of the Elements of Operational Design. Systemic Operational Design (SOD) is a process with potential to replace the Elements of Operational Design in Army Doctrine and resolve this crisis. This monograph introduces the reader to SOD by providing an application of it to a familiar context. The GWOT is a familiar context that, for the purposes of this monograph, serves as a foundation for building an inquiry into the nature of SOD. This inquiry will highlight the potential of SOD to replace the Elements of Operational Design. In the course of this inquiry, three key questions are addressed. First, given the failure of the Elements of Operational Design to produce a strategic victory, are they still relevant in the age of globalization? Second, is Mass a valid principle of war on the twenty-first century battlefield? Last, should terrorism be classified as an act of war, or as a crime?

What is Systemic Operational Design?

SOD is a critical method, not a decision procedure. “It is a process of inquiry that produces both a framework rationalizing complexity and a framework for planning action in accordance with the logic of that complexity.”³ Systemic Operational Design is a process that involves the conduct of five separate but interrelated discourses to identify, refine, and translate a problem contained in strategic directive into an operational framework that enables planning.

¹FM 3-0, Operations (Washington D.C.: Department of Defense, 2001) 2-3.

²Ibid., 5-6.

³Shimon Naveh, “Questions of Operational Art”, (Powerpoint presentation given at the School of Advanced Military Study, Fort Leavenworth on 17 January 2006), in *Systemic Operational Design (SOD)*:

Discourse is a process of argumentation that results in a shared understanding by a group that is greater (depth and breadth) than the understanding of any one individual prior to the conduct of the discourse. The SOD discourses are System Framing, Rival as Rationale, Command as Rationale, Logistics as Rationale, and finally, Operational Framing.

What are the Elements of Operational Design?

US Army Field Manual 3-0 defines and describes the application of the Elements of Operational Design:

A major operation begins with a design – an idea that guides the conduct (planning, preparation, execution, and assessment) of the operation. The Operational design provides a conceptual linkage of ends, ways, and means. The elements of operational design are tools to aid designing major operations.⁴

The Field Manual identifies nine Elements of Operational Design: endstate and military conditions; center of gravity; decisive points and objectives; lines of operation; culminating point; operational reach, approach and pauses; simultaneous and sequential operations; linear and nonlinear operations; and tempo.

Framework for the Narrative of the Monograph

The purpose of the first chapter of the monograph is to demonstrate, through the application of systems theory to the international security environment, that discourse generates deeper understanding of a problem. The chapter claims that the rise of the non-state actor, which is an emergent property of globalization, undermines the rule of law. In SOD, the purpose of the System Frame is to identify the problematic emergence and establish a conceptual framework for further study of this emergence.

The purpose of chapter two is to employ discourse to gain a deeper appreciation for the nature of the Rival. The claim of this Chapter is that by leveraging the dynamic nature of the

Gaining and Maintaining the Cognitive Initiative, by MAJ Ketti C. Davidson, (Ft. Leavenworth: CGSC, 2006) 31.

Principle of Mass, thru swarming and terrorist attacks, the non-state actor gains an advantage over the nation-state. In SOD, the Rival as Rationale discourse enables the design team to hypothesize about the logic underpinning the Rival's behavior. This hypothesis sets the boundary, by establishing the information required to confirm or falsify the hypothesis, for further inquiry into how to move the system in a desired direction.

The purpose of chapter three is to demonstrate the potential for the Command as Rationale discourse to integrate Joint capabilities through the concept of Organizational Architecture. This chapter claims that the best way to combat terrorism is under a "terrorism as crime" versus a "terrorism as war" paradigm. In SOD, the purpose of the Command as Rationale discourse is to use the logic from the hypothesis generated during the Rival as Rationale discourse to examine the range of actions that possess the potential to move the system in a desired direction through an iterative cycle of learning through action.

The purpose of chapter four is to show how the Logistics as Rationale discourse enables the design team to develop innovative solutions imbedded in the logic of the system. Additionally, this chapter demonstrates that in SOD, logistical requirements are not simply "beans and bullets" rather; the concept encompasses a broader range of needs. This chapter claims that a proper application of Counterinsurgency Theory to the GWOT dictates an emphasis on strengthening weak states through a variety of assistance programs. This indirect approach to the problem of terrorism has many more benefits than direct confrontation by kinetic means. In SOD, the purpose of the Logistics as Rationale discourse is to examine the range of actions identified in Command as Rationale to address questions of feasibility given resources available.

The purpose of the final chapter is to demonstrate that SOD is a Commander's tool. Proper employment of SOD results in a design that informs every aspect of the planning process. The claim of this chapter is that SOD is preferable to the Elements of Operational design because

⁴FM 3-0, Operations (Washington D.C.: Department of Defense, 2001) 5-6.

it seeks to resolve problems through learning (an iterative cycle of informed action), while the Elements of Operational Design presume complete knowledge of the environment and attempt to impose a solution by way of causal linkages and reverse planning. In SOD, the purpose of the Operational Framing discourse is to capture the essence of the previous discourses into a coherent design. Through the art of command, the Commander uses this design to inform the planning process.

Methodology

For explanatory purposes, this monograph replicates discourse by synthesizing the works of many authors and experts from diverse but related fields into a coherent, common narrative. The narrative of the monograph is similar to the narrative that a discourse leader would produce following discourse with a SOD planning group composed of experts with diverse backgrounds presented with a common problem. Qualitative analysis of the synthesis contained in the narrative answers the monograph's research questions.

CH 1: SYSTEM FRAMING: A COGNITIVE EXPLORATION OF THE ENVIRONMENT

In his Operational Command Seminar conducted in January 2007, Dr. Shimon Naveh outlined the process of SOD to a select group of students from the School of Advanced Military Studies. During the seminar, Dr. Naveh educated the students on the conduct of discourse. Each discourse in SOD has its own principal themes and key questions. The themes and questions do not constitute a checklist for the conduct of SOD, rather, they are designed to “prime the pump” on the discourse process. The principal themes for the System Frame discourse are Structuring the Inquiry, Strategic Context, Strategic Narrative, Strategic Trending, and System Limits/Transformation Potential.⁵

During this discourse, the design team seeks to understand and frame the operational environment. The directive, ordering action or planning, from the strategic sponsor is the lens through which the design team must view the environment, but the team has the latitude to request a new prescription should they deem it necessary. LTC Sorrells captures this concept well in his monograph, *Systemic Operational Design: An Introduction*, “The first unique aspect of SOD is it does not assume any strategic directive is final or complete.”⁶ In the example employed here, the strategic directive is a synthesis of the State of the Union Speech of 20, September 2001 and the September 2002 National Security Strategy. A critical look at the Strategic Directive and the environment lead to the question – is war the best solution to the problem?

⁵Shimon Naveh, *Systemic Operational Design –Update*, Operational Command Seminar Reference Book, (Ft. Leavenworth, KS: 16-26 January 2007) Tab D.

⁶Sorrells Et Al, *Systemic Operational Design: An Introduction*, SAMS Monograph, (Ft. Leavenworth: USACGSC, 2005) 15.

The Strategic Directive

The Al Qaeda terrorist attack against the United States on September 11, 2001 ushered in a new era of uncertainty in the international security arena characterized by the rise in power of the non-state actor. In response to the attacks, during the State of the Union speech, President Bush declared and outlined a Global War on Terrorism (GWOT). President Bush stated, “The only way to defeat terrorism as a threat to our way of life is to stop it, eliminate it and destroy it where it grows”⁷. The president went to great lengths to outline who the enemy was, and how he intended to conduct the war. “We will direct every resource at our command – every means of diplomacy, every tool of intelligence, every instrument of law enforcement ...and every necessary weapon of war – to the destruction and to the defeat of the global terror network.”⁸ Planners at the highest levels of the US government then spun into action in an effort to translate the President’s bold words and vision into action. The military contingent of this group turned to the doctrinal process of Campaign Planning and the associated Elements of Operational Design. The fruits of their labor were the rapid toppling of the Taliban Regime in Afghanistan, and eventually Saddam Hussein in Iraq. Unfortunately, the deterministic thought and linear planning processes they followed by using the Elements of Operational Design methodology left much to be desired; witness the insurgencies and challenging reconstruction efforts ongoing in both countries. An approach to campaign planning and operational design that asks whether “war” is the correct tool to solve this problem may have led to different results in the GWOT. The academic exercise of applying an alternate method to solving the problems underpinning the GWOT highlights the potential of using a fundamentally different approach. This potential may prove decisive to future actions in support of “The Long War.”

⁷George W. Bush, Transcript of the State of the Union address, September 20, 2001 [posted online], available at <<http://archives.cnn.com/2001/US/09/20/gen.bush.transcript/>>; internet; accessed 6 FEB 07.

⁸Ibid.

The System Frame

Generally, there are two types of systems, closed and open. The elements of a closed system are free to interact with each other without influences from forces outside the system. An open system is one that actively interacts with its environment. Open system models are, by definition, complex. An infinite number of variables may affect the behavior of an open system; this is why behavioral scientists have difficulty modeling human activity. Nation-states and non-state actors are both open systems; their organizational structures shape their interaction with the environment. In their monograph, *Turbulent Arena*, William Casbeer and Troy Thomas explain the benefits of an open systems methodology when studying organizations that are influenced by forces outside their social boundary. “As a transportable tool, it allows for structured analysis across regions, which is increasingly important given the transnational character of VNSA [Violent Non-State Adversary].”⁹ Dietrich Doerner summarizes the importance of system dynamics in his book, *The Logic of Failure: Recognizing and Avoiding Error in Complex Situations*, “The dynamics inherent in systems make it important to understand developmental tendencies. We cannot content ourselves with observing and analyzing situations at any single moment but must instead try to determine where the whole system is heading over time.”¹⁰ This discourse will therefore, attempt to model nation-states and non-state actors with an open system methodology with special emphasis on their organizational structures. Additionally, it will analyze their interaction with each other and the environment over time to determine the transformation potential within the system. The inescapable conclusion is that non-state actors have an advantage at the strategic level, and are able to manipulate their environment to undermine the rule of law that governs nation-states.

⁹Troy S. Thomas, and William D. Casebeer, *Turbulent Arena: Global Effects Against Non-State Adversaries*, INSS Occasional Paper 58 (USAF Academy, Colorado: USAF Institute for National Security Studies, USAFA/DFES 2005) 3.

¹⁰Dietrich Doerner, *The logic of Failure: Recognizing and Avoiding Error in Complex Situations*, Translated by Rita and Robert Kimber (Cambridge: Metropolitan Books, 1996) 40.

The Nation-State

The American Heritage Dictionary defines a nation-state as “A political unit consisting of an autonomous state inhabited predominantly by a people sharing a common culture, history, and language.”¹¹ This definition is too simplistic. An expanded definition should incorporate the concept of a Complex Adaptive System as described by Robert Axelrod and Michael D. Cohen in their book *Harnessing Complexity*. As Axelrod and Cohen show, a Complex System has strong interactions among its elements. Change to a Complex System is the result of a selection process where agents within the system change their individual strategy. A selection process that leads to measurable success of part of the system is termed “Adaptation.” A Complex Adaptive System is a system where agents or populations continually seek to adapt. In an open environment, a Complex Adaptive System may enter into a co-evolutionary process where multiple populations of agents adapt to each other. This co-evolutionary process can lead to perpetual novelty.¹² Therefore, a more complete definition of a nation-state must include an acknowledgement that it is a hierarchically structured Complex Adaptive System manifesting itself as a political unit consisting of an autonomous state inhabited by a people sharing a common culture, history, and language.

Because nation-states interact with each other in a global environment, a co-evolutionary process and a state of perpetual novelty clearly exist. John Robb describes the global environment in his web blog article “Big Bangs” as “a relatively high performance system driven by real-time global markets and rapid technological progress.”¹³ The problem with a global environment that fosters a co-evolutionary process between nations is that perpetual novelty is

¹¹*The American Heritage Dictionary of the English Language*, 3rd Edition, Ed. Anne H Soukhanov (Boston: Houghton Mifflin Company, 1992) P 1203.

¹²Robert Axelrod, and Michael D. Cohen, *Harnessing Complexity: Organizational Implications of a Scientific Frontier* (New York: Persus Books Group, 2000) P 7-8

¹³John Robb, “Big Bangs,” In *Global Guerrillas: Networked Tribes, Infrastructure Disruption, and the emerging bizarre of violence*, [Journal Online]; Available from

not desirable with respect to national and international systems of governance – at least not if you intend to avoid anarchy. A dynamically unstable system requires dampening forces to enable it to function properly. Actions taken to control the Complex Adaptive System that is a nation-state are analogous to dampening forces in systems engineering. For example, vibration is a feedback mechanism of a motorcycle engine. The faster the engine turns the more vibration it produces. While this feedback is valuable to the rider to determine the level of performance of the engine, it is not necessarily desirable – excess vibration is uncomfortable for the rider. Systems engineers solve this problem by installing rubber mounts for the engine on the frame of the motorcycle to dampen feedback and create a smoother ride. In a nation-state, a hierarchical organizational structure and associated bureaucratic processes perform the function of dampening the system, enabling interaction with the environment in a controlled manner. Thus, the nation-state, and by extension the state-centric global environment can be viewed as moderately stable systems and metaphorically mechanical in nature; they are designed and built rather than evolved or grown over time.

A hierarchical organizational structure and its associated processes are not the sole mechanisms to dampen the feedback loop between a nation-state and the global environment. Physical limits (number and capacity) to connections with the environment play a significant role as well. The fewer connections with the environment the less opportunity the environment has to introduce unexpected, unintended, or undesired feedback into the Complex Adaptive System that is the nation-state. North Korea and some Middle Eastern states are excellent examples of nations with limited connectivity to the global environment as they have yet to embrace the full potential of globalization. Robb argues that the dampening functions that were operative prior to the advent of globalization - borders, distance, and government - are quickly fading.¹⁴

<http://globalguerrillas.typepad.com/globalguerrillas/2006/03/journal_big_ban.html>; Internet; Accessed 1 NOV 06.

¹⁴Ibid.

The reason the old dampening functions are fading is that with the advent of globalization the environment has fundamentally changed. There is now greater global connectivity and a higher capacity per connection. The environment introduces feedback at a level beyond the capacity of the nation-states' dampening functions to compensate. The irony of this dynamic is that when the collective of nation-states on the planet gave birth to the information revolution and globalization, the forces they unleashed will require them to change their very nature in order to return the global environment to a state of dynamic stability. Although the terms post-date his work, Dr. J. Franklin James accurately describes the process by which unintended or undesired feedback affect a Complex Adaptive System in his book *The American Revolution Considered as a Social Movement*. Jameson argues that most who originated the American Revolution had no other than a political program in mind, but that far-reaching societal change was inevitable. Illustrating the point, Jameson states, "The various fibres of a nation's life are knit together in great complexity, it is impossible to sever some without also loosening others and setting them free to combine anew in widely different forms."¹⁵ This is the peril brought on by the unleashing of the forces driving globalization.

The Non-State Actor

An ironic and unintended consequence of the birth of globalization is the rise in power of the non-state actor. There are many definitions of a non-state actor. Dr. Sean Kalic argues in his monograph *Combating a Modern Hydra: Al Qaeda and the Global War on Terrorism*, that the terms non-state actor and terrorist are not synonyms. He states, "Scholars define NSAs [Non State Actors] as actors autonomous from the structure and machinery of the state, and of the governmental and intergovernmental bodies below and above the formally sovereign state:

¹⁵Franklin J. Jameson, *The American Revolution Considered As A Social Movement*, (Princeton: Princeton University Press, 1926) 9.

Transnational rather than transgovernmental.”¹⁶ This broad definition affords scholars leeway to categorize a large number of fundamentally different organizations, both legitimate and illegitimate, as non-state actors for comparison and study - much like a biologist categorizes plants and animals by kingdom, phylum etc.

This System Frame concerns itself only with non-state actors who are illegitimate with respect to international law who use insurgency theory, violence, terrorism, and criminal activity to achieve their aims; and who display the properties of a Swarm System as outlined by Kevin Kelly in his book, *Out of Control*. Of the numerous non-state actors who meet these criteria, Al Qaeda is identified in the strategic directive and best represents the emergent property of the post 9-11 international security environment. Therefore, Al Qaeda will be the benchmark for theoretical discussion and modeling. The application of the theoretical Al Qaeda model to less developed non-state actors will test its validity.

Casebeer and Thomas summarize an “open system framework” view of the non-state actor as an organic system noting: “We are left with a view of organizations as organic systems. That is, organizations bear more than metaphoric similarity to organism. They grow, adapt, spawn, and in some cases, die.”¹⁷ Casebeer and Thomas are exactly right in their assessment, but Kevin Kelly provides a more robust framework to develop this concept – the Swarm System.

In his discussion of Swarm Systems, Kelly acknowledges there are many essentially interchangeable names for open systems, “The class of systems to which all of the above belong is variously called: networks, complex adaptive systems, swarm systems, vivisystems or collective systems.”¹⁸ He describes the complexity of a swarm model, “What emerges from the

¹⁶Sean N. Kalic, *Combating a Modern Hydra: Al Qaeda and the Global War on Terrorism*, Global War on Terrorism Occasional Paper #8, (Ft. Leavenworth: Combat Studies Institute Press, 2005) 3.

¹⁷Thomas and Casebeer, 9.

¹⁸Kevin Kelly, *Out of Control: The new Biology of Machines, Social Systems, and the Economic World* (Cambridge: Perseus Books, 1994) 21.

collective is not a series of critical individual actions but a multitude of simultaneous actions whose collective pattern is far more important.”¹⁹

A more developed definition of a non-state actor combines concepts from the definitions of each Dr. Kalic, Casebeer and Thomas, and Kelly. Therefore, a non-state actor is a complex and highly adaptive interdependent collective of transnational members, autonomous from the structure and machinery of the state, bound together by a common goal, ideology, or function (desired output of the system), but not by any single authority.

A significant difference between the nation-state as defined above and the non-state actor as described here is that the nation-state is mechanistic with dampening forces designed into the system where the non-state actor appears to evolve, like an organism, from the environment. Most importantly, it has no dampening mechanisms.

If the open system that is the non-state actor has no dampening mechanisms, then how does it function? The answer to this question lies in the natural world - a beehive, an ant colony, a flock of birds in flight, and a multitude of similar complex open systems all share the answer – distributed control. As Kelly summarizes, “Since there is no center of control, the management and heart of the system are said to be decentrally distributed within the system, as a hive is administered.”²⁰ However, because all humans possess free will, there must be something a driving factor that causes the non-state actor to form. The driving factor is the common goal, ideology, or function that binds the transnational members together. Typically, the driving factor manifests itself as a political aim, most commonly achieved by non-state actors through insurgency. This is where the will of the people enters the equation.

There is a false dilemma here, if the will of the people is the driving factor that causes the formation of a non-state actor, doesn’t this imply leadership on the part of one individual or a group of individuals? If so, then the non-state actor will have a center, hub, or hierarchical

¹⁹Ibid., 21.

structure, enabling the leader or group to control the organization, which violates the definition outlined above. The answer to this dilemma lies again in nature, this time with the process of evolution. A non-state actor, being a collection of humans, must have a reason for its formation. Once the non-state actor forms, its interaction with the environment and its highly adaptive nature combine to create a feedback loop or co-evolutionary cycle that dictates evolution of the entire system. Because ideas and ideology are bigger than individuals, a non-state actor, composed of autonomous members, will eventually evolve into a stable and productive system at the brink of chaos without central control. Kelly provides the appropriate definition of “autonomous:” “Autonomous means that each member reacts individually according to internal rules and the state of its local environment.”²¹ Therefore, because each member of the system adapts based on feedback from other members of the system and feedback from the environment, after a few evolutionary cycles, central control of a non-state actor is not possible. This phenomenon is currently playing out with Al Qaeda, a group spawned by the ideology of a few that is now seemingly leaderless. Ideology itself serves the function of a rudder for the organization as it travels towards its ultimate aim.

Robert Bunker and Matt Begert describe the leaderless command and control cognition that the Al Qaeda networked structure enables, “a collective vision develops either by consensus or initial design that defines the reason d’ etre of the network.” Bunker and Begert postulate that the Al Qaeda network is promoting a collective vision at the strategic level, “a combined 20th century theory of a unified Islamic polity with restoration of the Islamic Caliphate that, at its height, stretched from Spain to India.”²² Al Qaeda arrived at this methodology of leaderless command and control because of feedback from the environment. During Operation Enduring Freedom, the United States destroyed much of the physical and interpersonal networked structure

²⁰Ibid., 22.

²¹Ibid.

of the Al Qaeda organization. In order to survive, the network re-wired itself and adapted to a form that relied more on distributed control. Bukner and Begert describe the transformation:

Al Qaeda has morphed from an outgrowth of an office of the international Muslim brigade that opposed the Soviets in Afghanistan and trained Mujahedeen (holy warriors) in the 1980s into a tightly controlled global network based in Afghanistan (1988-2001) and then into its present form (2001-2004) of a loose collection of independent nodes and cell nodes that plan, finance and conduct their own attacks.²³

Kelly identifies four distinct facets of distributed being that supply Swarm Systems their character: (1) the absence of imposed centralized control; (2) the autonomous nature of subunits; (3) the high connectivity between the subunits; (4) the webby nonlinear causality of peers influencing peers.²⁴ Again, time horizons are important. A non-state actor does not come to being in its final state; it evolves over time. The rate of evolution is a function of its connectivity to the global environment and feedback. Al Qaeda has evolved over time and now possesses each of these characteristics.

Environmental Factors

In his article, “Transnational Organized Crime: Law Enforcement as a Global Battlespace,” Mark Galeotti – the director of the Organized Russian and Eurasian Crime Research Unit at Keele University, UK – describes the effects of globalization on organized crime and presents a framework for analyzing the evolution of organized crime resulting from globalization. Galeotti’s analytic framework for the evolution of the ‘underworld’ contains five components: Technological Drivers, Political Drivers, Economic Drivers, Enforcement Drivers, and Internal

²²Robert J. Bunker, and Matt Begert, “Operational Combat Analysis of the Al Qaeda Network,” In *Networks, Terrorism, and Global Insurgency*, ed. Robert J. Bunker (New York: Routledge, 2005) 165.

²³Ibid., 165-166.

²⁴Kelly, 22.

Drivers.²⁵ Galeotti's concepts of Enforcement Drivers and Internal Drivers warrant further study as they create a holistic picture of the environment.

Enforcement Drivers are counter-productive effects resulting from successful police operations and the introduction and enforcement of new laws.²⁶ Enforcement Drivers highlight the importance of evaluating the long-term implications of near term solutions to problems before taking actions. The concept of Enforcement Drivers suggests the necessity to continuously re-evaluate the environment because every action generates an environmental response.

Galeotti recognizes that the global underworld is not purely a product of its context. Rather, Internal Drivers also shape it. He describes the internal dynamics as, "[a]lliances between organizations can avoid conflict and maximize efficiency, just as feuds and competition may shatter an organization or alternatively elevate a stronger, more effective new organization in an exercise in social Darwinism."²⁷ The process of Internal Drivers and the resulting concept of social Darwinism make the non-state actor a significant threat to the nation-state because temporary alliances between disparate groups for the purpose of conduct Swarming attacks for mutual benefit of the disparate groups are extremely hard to template, predict, or counter. By combining the concepts of social Darwinism and Enforcement Drivers, the notion that actions by a nation-state to defeat a non-state actor may actually increase the strength and performance level of the non-state actor becomes theoretically likely.

Non-state actors are experiencing exponential growth through globalization. Axelrod and Cohen describe the impact of the information revolution on open systems:

If complexity is often rooted in patterns of interaction among agents, then we might expect systems to exhibit increasingly complex dynamics when changes occur that intensify interaction among their elements. This, of course, is exactly what the information revolution is doing: removing the barriers to interaction

²⁵Mark Galeotti, "Transnational Organized Crime: Law Enforcement as a Global Battlespace," In *Non-state Threats and Future Wars*, Ed. Robert. J. Bunker (Portland: Frank Cass & CO Ltd., 2003) 29-34.

²⁶*Ibid.*, 32.

²⁷*Ibid.*

among processes that were previously isolated from each other in time or space.²⁸

Bunker and Begert also illustrate this point, “As they grow, network structures operate in a manner contrary to hierarchical structures. Whereas hierarchies see diminishing returns as they grow too large, networks see increasing returns and value.”²⁹ With an understanding of the dynamic relationship between a non-state actor and its environment, it is time to consider the interaction between a non-state actor and a nation-state in the global environment. If Al Qaeda’s theoretical template for success against a nation-state continues to bear fruit, then it is simply a matter of time before other non-state actors adopt it. This ‘beta-testing’ of the template, combined with growth in the number and complexity of non-state actors caused by forces described above by Axelrod and Cohen, will create a global security environment that is untenable for the nation-state in its current form.

Analysis

The application of systems theory to the global security environment highlights key aspects of both the nation-state and the non-state actor. Tensions between the two are largely a function of their interaction in an increasingly connected environment. The nature of each system gives the non-state actor an advantage over the nation-state in an increasingly complex environment. The metaphorically organic growth of the non-state actor, enabled by their organizational structure and the forces behind globalization, allows them to adapt to the environment and innovate exponentially faster than a nation-state, which is mechanistic in nature and openly relies on dampening mechanisms to control its interaction with the environment. This advantage creates an inherent asymmetry in favor of the non-state actor at the strategic level. Because non-state actors are illegitimate, this asymmetrical advantage has the effect of undermining the rule of law, which governs the nation-state and the international security

²⁸Axelrod and Cohen, 26.

environment. These issues must be addressed in a manner that returns the advantage to the collective of nation-states so that the rule of law is once again allowed to reign supreme and govern the international security environment.

The proper way to address the rise in power of the non-state actor, as evidenced by the emergence of Al Qaeda and terrorism, is not a declaration of “war” on either Al Qaeda or terrorism. When the United States declared a war on terrorism, and by default Al Qaeda, it bestowed on the non-state actor the one thing they require, and covet most; legitimacy. Since the establishment of the Westphalian system of states following the Thirty Years War, most accepted definitions of “war” express in some form or another that war, to paraphrase Clausewitz, is a continuation of politics by other means. Alexander Moseley explains a difficulty with such a definition for war in his book, *A Philosophy of War*. Moseley argues, “Often, definitions of war imply that the incumbent target is morally or politically legitimate, which implies a particular political conception of the world, namely that it involves states, and that such states either hold power legitimately or not.”³⁰ If the concept of war does not evolve past the notion of a conflict between states to achieve a political aim, then a declaration of war against terrorism confers legitimacy upon an illegitimate non-state actor, giving it power and making the very declaration of “war” self-defeating and problematic. This dilemma is one that the Elements of Operational Design are ill-equipped to address. SOD is a far superior tool for identifying and addressing this strategic level problem because it encourages questioning whether a declaration of war is the correct solution to the problem.

Finally, the System Frame highlights the importance of ideologies and legitimacy. The fact that Al Qaeda has evolved into a seemingly leaderless Swarm System makes it difficult to predict and therefore, to counter, contain and neutralize. Under the concept of decentralized control, the formational ideology of the organization is now responsible for guiding it towards the

²⁹Bunker and Begert, 162.

strategic aim. Additionally, the ideology generates popular support, which is required to increase the size of the network and perpetuate its existence. Ideologies are extremely difficult to target, let alone defeat; they need not be legal or rational to be effective agents for enabling decentralized control. Legitimacy underpins an ideology. An ideology can be legitimate in the eyes of the law, or an ideology can create its own “internal legitimacy” within a support base. The later notion, as expressed by Kimbra L. Fisher, is examined in Chapter 2.

The working hypothesis derived from this discourse and developed further in chapter 2, is that the relative nature of the principle of Mass enables the non-state actor to achieve an advantage at the strategic level through the conduct of ‘swarm’ and ‘pulsing’ attacks across the DIME at the tactical level. Information operations and insurgency theory constitute the operational level, translating tactical actions into strategic effects for non-state actors. Chapter 3 explores ways to address the emergence of the non-state actor without conferring upon them legitimacy through a declaration of war.

³⁰Alexander Moseley, *A philosophy of War*, (New York: Algora Publishing, 2002) 15.

CH 2: RIVAL AS RATIONALE: UNDERMINING THE RULE OF LAW

The principal themes for the Rival as Rationale discourse are, Learning the Rival System, The Rival as Cultural System, The Rival as Political System, The Rival as Economic System, The Rival as Social System, The Rival's Strategic System, The Rival's Command and Learning System, The Rival's Logistical System, The Rival's Operational Maneuvering System, and Disruption Conditions.³¹ Application of these themes to the emergence identified during the System Framing leads the design team to an initial understanding of the Rival. The most important aspect of the Rival as Rational discourse is the discovery of areas for exploration that have the potential to increase the design teams' knowledge of the Rival. The remaining discourses examine the methods for the conduct of that exploration.

The Rival

The hypothesis generated during the System Framing leads to a relatively clear picture of how and why the Rival acts. At the strategic level there is a political aim. For Al Qaeda, the long-term aim is the establishment of a unified Islamic polity through restoration of the Islamic Caliphate, the destruction of the United States and Israel, and the overthrow of apostate Islamic regimes. The short to mid-term aim of Al Qaeda is to drive the United States out of the Middle East (initially Saudi Arabia, and now Iraq), and undermine apostate governments in the region.³² At the operational level, insurgency theory and information operations translate tactical success into strategic effects. For Al Qaeda, the operational level is almost purely in the cognitive and informational realm. At the tactical level, Al Qaeda employs Swarming tactics to enable terrorist attacks, which in turn, generates Mass across the DIME.

³¹Shimon Naveh, *Systemic Operational Design –Update*, Operational Command Seminar Reference Book, (Ft. Leavenworth, KS: 16-26 January 2007) Tab D.

³²Kimbra L. Fisher, *Challenging the Hegemon: Al Qaeda's Elevation of Asymmetric Insurgent Warfare Onto the Global Arena*, In *Networks, Terrorism, and Global Insurgency*, ed. Robert J. Bunker (New York: Routledge, 2005) 119-127.

Implicit in this hypothesis is that Al Qaeda is loosely following the strategy for a protracted popular war as outlined by Mao. This theory proscribes three distinct phases. The first phase, which encompasses Al Qaeda's short-term goal, is, "A strategic defense, a time when the enemy is on the offensive, and the insurgents must concentrate on survival, political organization and low level violence."³³ Through this lens, the attacks against the United States on September 11, 2001 may be viewed as a successful attempt to draw the United States onto the battlefield. The first phase of this conflict is ongoing. The second phase, which encompasses Al Qaeda's mid-term goal, is "the Strategic Stalemate, which is characterized by guerrilla warfare. Further escalation and victories, which lead to demoralization, lethargy, and defections on the government side, usher in the Strategic Offensive."³⁴ In this application, the "government side" is that of the United States and Al Qaeda's goal is to expel the United States from the Middle East and undermine apostate governments in the Region. The third and final phase, the Strategic Offensive, will accomplish Al Qaeda's long-term goal or political aim. During this phase, "The insurgents move from guerrilla warfare to mobile conventional attacks on a large scale, and the political and psychological effects of the insurgent victories lead to a collapse of the government."³⁵ In this context, the "government" means all apostate governments in the Middle East and the state-centric geopolitical system, as Al Qaeda's goal is to re-establish the Caliphate and eliminate the current world order. Generating Mass across the DIME at the tactical level is a critical requirement of the Al Qaeda strategy. Therefore, a deeper understanding of the principle of Mass, in all its forms, is in order.

³³Brad E. O'Neil, *Insurgency and Terrorism: Inside modern Revolutionary War*, (Dulles: Brassey's Inc, 1990) 35.

³⁴*Ibid.*, 36.

³⁵*Ibid.*

The Evolution of the Principle of Mass

In his monograph, *Is Mass Still a Valid Principle of War on Today's Battlefield?*, LTC Kenneth N. Firoved argues that Mass is a dynamic principle. He traces its evolution over time, “from a concept of weighted concentration of brute force at a single point...to its present definition which emphasizes the concentration of the effects of combat power at the decisive time and place to achieve the objective.”³⁶ LTC Firoved envisions a perpetual evolutionary cycle for the principle of Mass and sites Operation Desert Storm in 1991 as an example of the next iteration. “The melding of advanced technologies with new operational concepts makes possible synchronization, simultaneity, and depth. This allows the massed effects of dispersed combat power to be brought to bear against the enemy at numerous decisive points throughout the theater of operations.”³⁷ His notion of the future application of the principle of Mass as ‘massed effects’ of ‘dispersed combat power’ applied at numerous decisive points is an accurate description of Swarming.

John Arquilla and David Ronfeldt describe Swarming as, “seemingly amorphous, but it is a deliberately structured, coordinated, strategic way to strike from all directions, by means of a sustainable pulsing of force and/or fire, close-in as well as from stand-off positions.”³⁸ Sean J. A. Edwards authored a study of Swarming entitled, *Swarming on the Battlefield: Past, Present, and Future*, in which he identifies ten historical examples of Swarming for the purposes of analyzing its origins in order to examine its potential on future battlefields. Edwards argues that, “Swarming can be conceptually broken into four stages: locate, converge, attack, and disperse.”³⁹

³⁶Kenneth N. Firoved, LTC USMC, *Is Mass Still a Valid Principle of War on Today's Battlefield?* (Newport: Naval War College, Joint Military Operations Department, 1996) 15.

³⁷IBID 15.

³⁸John Arquilla, and David Ronfeldt, *Swarming: The Future of Conflict*, (Santa Monica: RAND, 2000) vii.

³⁹Sean J. A. Edwards, *Swarming on the Battlefield: Past, Present, and Future*, (Santa Monica: RAND, 2000) 68.

In his article, “The Evolution of a Revolt,” T.E. Lawrence provides a first hand account of Swarming at the tactical level. Lawrence describes his war and the concept underpinning his tactics:

Most wars are wars of contact, both forces striving to keep in touch to avoid tactical surprise. Our war should be a war of detachment: we were to contain the enemy by the silent threat of a vast unknown desert, not disclosing ourselves till the moment of attack. This attack need be only nominal, directed not against his men, but against his materials: so it should not seek for his main strength or his weaknesses, but for his most accessible material.⁴⁰

Lawrence expands the idea, “Armies were like plants, immobile as a whole, firm-rooted, nourished through long stems to the head. We might be a vapour, blowing where we listed.”⁴¹ This concept leads Lawrence to re-structure his forces, “Tactically we must develop a highly mobile, highly equipped type of army, of the smallest size, and use it successively at distributed points of the Turkish line...”⁴² These tactics closely resemble the modern day concept of Swarming, furthermore, the force structure Lawrence adopts provides a conceptual template for a Swarming force. The Command as Rationale discourse will explore this template and apply it in a manner that does not confer legitimacy to the non-state actor.

To demonstrate how non-state actors use Swarming and to further highlight the characteristics of the Rival, this discourse will compare and contrast the application of the Principle of Mass by nation-states and non-state actors across the DIME. As a byproduct, the discourse will demonstrate that Mass is still very much a valid Principle in the Twenty-first Century security environment.

⁴⁰T. E. Lawrence, “The Evolution of a Revolt,” Combat Studies Institute Reprint [Article Online] available from <<http://www-cgsc.army.mil/carl/resources/csi/Lawrence/lawrence.asp>> accessed 2 DEC 06. 10.

⁴¹Ibid., 8

⁴²Ibid., 13

The Diplomatic Instrument

Nation-states achieve diplomatic effects through Traditional and Public diplomacy conducted on the national and international level. Michael McClellan, Counselor for Public Diplomacy for the US Embassy in Dublin, summarizes the relationship between Traditional and Public diplomacy in his article, “Public Diplomacy in the Context of Traditional Diplomacy:”

Traditional diplomacy - that is ‘government-to-government diplomacy’ - is focused mainly on efforts by officials of one country to persuade officials of another country to take particular actions. Public diplomacy, on the other hand, aims to shape the public opinion environment in a target country so that officials in that country can take actions the advocate country wants that will be accepted by the general public.⁴³

A key distinction, therefore, between Traditional and Public diplomacy is the audience. In Traditional diplomacy, instruments of the legitimate government are the audience. In Public diplomacy, any individual or group of individuals within a target populace, government, or region may be the audience.

In his book, *Soft Power*, Joseph S. Nye Jr. outlines and discusses three dimensions of Public Diplomacy: Daily Communications, Strategic Communications, and the development of long-term relationships with key individuals. Nye argues that Daily Communications explain the context of domestic and foreign policy decisions; Strategic Communications employs simple themes and messages in a campaign to advance a policy or set of actions over time. Development of relationships with key individuals is accomplished through scholarships, exchanges, training, seminars, conferences and access to media channels. Such exchanges have involved over 200 current or former heads of state.⁴⁴ Clearly, two key elements of successful diplomacy are money and time.

⁴³Michael McClellan, “Public Diplomacy in the Context of Traditional Diplomacy” [Article Online] available from <<http://www.publicdiplomacy.org/45.htm>> posted to the internet 27 MAR 05, accessed 3 DEC 06.

⁴⁴Joseph S. Nye Jr., *Soft Power: The Means to Success in World Politics* (New York: Public Affairs books, 2004) 107-110.

It is in the concept of public diplomacy that the principle of Mass gains relevance and influence to the diplomatic instrument of national power. The more people in the target country or region who are positively influenced by Public diplomacy, the greater the amount of “Soft Power” your country will enjoy. “Soft Power” is a term defined by Nye as “the ability to get what you want through attraction rather than coercion or payments. It arises from the attractiveness of a country’s culture, political ideals, and policies.”⁴⁵ In this context, Mass simultaneously connotes numbers of people and their will. Without achieving Mass, a nation cannot achieve diplomatic effects through public diplomacy.

The fact that non-state actors, operating autonomously from the structure of a state, can achieve diplomatic effects is astounding. This capability is an emergent byproduct of the information revolution and globalization. There are very few documented instances of a non-state actor achieving diplomatic effects, but the trend is likely to increase. By conducting Swarming attacks at the tactical level to generate Mass at the Operational level, Al Qaeda has achieved Strategic diplomatic effects. Al Qaeda achieved lasting diplomatic effects against Spain, and indirectly the United States, with the 11 March 2004 Madrid Train Bombing.

In the Madrid example, the swarming attack was the actual bombing of the train station. The timing of the attack, three days before a national election, combined with media coverage of the carnage to create Mass at the Operational level. In this instance, the Mass came in the form of negative sentiment against the Spanish government for its failure to protect its citizens and for inviting continued attacks at home by supporting the US led Coalition in Iraq. Operational Mass translated into strategic diplomatic effects when the heavily favored incumbent lost the national election, setting the stage for policy change in Spain. Bunker and Bergert summarize the Al Qaeda bombing of the Madrid train station and its dramatic results in their article “Operational Combat Analysis of the Al Qaeda Network:”

⁴⁵Ibid., x.

Fusing the tentative Spanish political will, the opposing view of the political candidates on the issue of troop deployments to Iraq, and the network-distributed opinion that the strategy of 'Jihadi Iraq' should include strikes against the enemy close to his home, demonstrates accurate information filtering and selection of an effective course of action.

The results of this action were influential. The expected election outcome was reversed, Spain began withdrawing its troops in accordance with the newly elected official's promise, and Spain entered into an agreement with the Al Qaeda network for 'protection' of its returning troops in compliance with bin Laden's 'stop shooting at Muslims' negotiation. In this one event, Al Qaeda has reduced the number of foreign troops in Iraq and attained the diplomatic and use-of-force status of a nation-state.⁴⁶

While these results may or may not prove difficult to duplicate in the future, they are but one of the methods available to a non-state actor to achieve diplomatic effects against a nation-state.

Non-state actors may also employ individuals or groups of individuals to lobby legitimate governmental agencies in a targeted nation-state to effect change from within the system. The International Campaign to Ban Landmines (ICBL) is a template for this type of effort. A network of 1400 non-governmental organizations operating in 90 different countries successfully lobbied the international community and created the Mine Ban Treaty – ratified by 122 Governments in December 1997.⁴⁷ This treaty effectively regulates the actions of Governments worldwide. Non-state actors may also run political candidates for election within a targeted state in order forward their agenda from within the legitimate government. Palestine is not technically a nation-state. However, Hamas' victory in the Palestinian Authority's second general election illustrates the potential of this method.⁴⁸ These examples demonstrate that achieving Mass, in various forms, is a requirement for a non-state actor to generate diplomatic effects. Two factors that affect a non-state actor's ability to generate Mass and apply it to the diplomatic arena are legitimacy of cause, and momentum created by popular support. These two factors are mutually supporting and are aided by the information revolution which offers the non-state actor previously unprecedented

⁴⁶Bunker and Begert, 154.

⁴⁷International Campaign to Ban Landmines, *Mine Ban Treaty 101*, [Article Online] Available from <[Http://www.icbl.org](http://www.icbl.org)>, accessed 8 DEC 06.

and immediate access to information and the ability to disseminate its own message on a global scale.

The Informational Instrument

The advent of Globalization and the Information Revolution ushered in a period of dramatic change for the nation-state with respect to its understanding and application of the Informational Instrument of National Power. Current Joint and Army doctrine struggle to keep pace with exponential growth in capability of information technologies upon which the Informational Instrument of National Power depends. This rate of change, fueled by the principles underpinning Moore's law for computer chip capacity, outpaces the ability of doctrine writers to see, understand, assess, and exploit the current information environment. For these and several other reasons, there is little consensus on what the Informational Instrument should accomplish for the nation-state in this era of increasing connectivity and Globalization. This has not always been the case.

Historically, the Informational Instrument of National Power has served the community of nation-states very well. In their thought provoking article, "Vertical Versus Horizontal Media: Using Agenda-Setting and Audience Agenda-melding to Create Public Information Strategies in the Emerging Papyrus Society", Col Donald L. Shaw, Ph.D., Dr. Bradley J. Hamm, and Thomas C. Terry highlight how information technology and information systems have framed public issues throughout the course of history in the United States and abroad. Their methodology of dividing mass media into two types, Vertical and Horizontal, clearly illustrates the impact of the Information Revolution and Globalization on the Informational Instrument and the state centric world. Shaw, et al. argue, "the era of mass media is passing into history, and as it does, the ability of leaders to shape and control national agendas is diminishing; in fact, their agenda-

⁴⁸Council on Foreign Relations, *Hamas*, [Webpage Online] Available from <[Http://www.cfr.org/publication/8968](http://www.cfr.org/publication/8968)>, accessed 8 DEC 06.

setting is now quite often contested.”⁴⁹ How did we get to this point in history? The answer begins with an understanding of the difference between Vertical and Horizontal media and includes an investigation of how nation-states and non-state actors leverage each type of media differently.

Vertical media are mass media: television, radio networks, and daily newspapers, which address the concerns of an entire community from a vertical (top-down), entire-community perspective. Horizontal media are niche media: magazines, websites, blogs, cable TV shows, and satellite radio stations that aim at specialized audiences and are often full of opinion and bent on interpretation, framing the news to fit within a particular ideological view⁵⁰. The ease of access to all forms of media created by the Information Revolution has enabled the economic principle of supply and demand to break the mass media monopoly on the information market. The rise of the niche media market is an emergent property of the Information Revolution and Globalization that diminishes the nation-state’s ability to set and control the national agenda. Mass, in the form of the empowerment of the individual through instantaneous connectivity to others is the single most important factor in the rise of niche media in the modern information environment.

While the United States government may no longer be able to set and control the national agenda, the enduring informational message of the United States is its greatest source of Soft Power. The message is derived from the American Revolution and articulated by Thomas Jefferson in the Declaration of Independence: “We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights,

⁴⁹Col Donald L. Shaw, Ph.D., Dr. Bradley J. Hamm, and Thomas C. Terry, “Vertical Versus Horizontal Media: Using Agenda-Setting and Audience Agenda-melding to Create Public Information Strategies in the Emerging Papyrus Society,” in *Military Review* vol 86, no. 6 (Ft. Leavenworth: US Army Combined Arms Center, 2006) 14.

⁵⁰*Ibid.*

that among these are Life, Liberty and the pursuit of Happiness.”⁵¹ The positive impact of this message on the Soft Power of the United States as it resonates around the globe cannot be overstated. The United States must learn to employ the Informational Instrument to harness the Soft Power derived from the words of the founding fathers as outlined in the Declaration of Independence. Leveraging Soft Power to create broad coalitions of Nations for collective action in the international security environment is how Nation States translate Soft Power into Mass.

The non-state actor’s use of the informational Instrument of National Power differs from that of the nation-state primarily in terms of objective. Where the nation-state employs vertical and horizontal media in an effort to influence large and diverse segments of the populace simultaneously, the non-state actor is concerned primarily with perceptions of individuals within their organization. Because non-state actors employ insurgency theory at the operational level to achieve their strategic aims, the primary audience for information operations must be their support base with the express purpose of strengthening commitment to the organization and its ideology. An internal audience enables the non-state actor to focus the Informational Instrument on perception rather than truth because the audience has already committed, at least tentatively, to the ideology of the organization. Kimbra L. Fishel provides insight into the Rival’s use of the Information Instrument as she applies this notion of internal legitimacy to the Al Qaeda network:

Concerns of maintaining ‘international legitimacy’ by not inflicting mass casualties are not relevant for this type of power. Since Al Qaeda is operating outside the existing international structure, which it sees as illegitimate and seeks its destruction, it is attempting to create a new legitimacy, with a base of supporters that seeks that type of mass destruction. The more Al Qaeda can inflict damage and casualties, the more its base of supporters will legitimize its actions. Both Muslims and non Muslims who reject Al Qaeda’s actions are irrelevant as both must be destroyed...This use of legitimacy turns the original idea of legitimacy inside out and is something new in asymmetric global warfare.⁵²

⁵¹The National Archives [website], The Declaration of Independence; available from <http://www.archives.gov/national-archives-experience/charters/declaration.html>; internet; accessed 20 January 2007.

⁵²Fisher, 124.

In this example, we see the duality of Al Qaeda's actions. On the one hand, their actions are designed to inflict casualties, damage, and terror against the target. On the other hand, their actions are designed to generate support within a community of believers committed to the organization and "fence sitters" who are attracted to the organizations ideology. At the heart of this duality lies a thorough understanding and clever application of Mao's theory for protracted popular war.

The question of why the information operations conducted by nation-states are so ineffective against the non-state actor must be considered. The simple answer is that the nation-state, cognizant of the fact that it operates in relation to other nation-states, may never stray too far from the truth; while non-state actors, who operate autonomously from the structure of the state, are beholden to perception not truth. Put another way, first impressions matter. The audience forms its opinion upon receipt of information. By the time a nation-state counters a falsity with the truth it is too late. Working through Horizontal media and the internet, non-state actors manipulate individual perceptions to influence large pools of potential recruits from the periphery of their traditional support base. Because the medium is inherently biased, messages broadcast over horizontal media resonate well with their target audience and are very difficult to counter.

The Military Instrument

Carl Van Clausewitz' said it must be made absolutely clear that, "war is nothing but the continuation of policy with other means."⁵³ In his book, *The Utility of Force: The Art of War in the Modern World*, General (R) Rupert Smith, describes "war" as it is cognitively known to most non-combatants, "war as battle in a field between men and machinery, war as a massive deciding

⁵³Carl Von Clausewitz, *On War*, Edited and translated by Michael Howard and Peter Paret, (New York: Alfred A. Knopf, 1993) 77.

event in a dispute in international affairs.”⁵⁴ According to General Smith, this description of war forms the essence of an interstate industrial warfare paradigm. The term paradigm employed by General Smith is a reference to Thomas Kuhn’s theory of scientific revolutions where a scientific community practices “within a set of received beliefs that are rigidly upheld, to the extent of suppressing novelties that are subversive to them.”⁵⁵ General Smith contends that the community of military thinkers operates under the paradigm of industrial age warfare. The theories of Clausewitz and Jomini seemingly underpin the paradigm of industrial age war. Implicit to their theories and this paradigm, is that war and the use of the military instrument, are the purview of nation-states.

General Smith argues that our understanding of the use of military force is based on “concepts founded on conflict between states, the maneuver of forces in masse, and the total support of the state’s manpower and industrial base, at the expense of all other interests, for the purpose of an absolute victory.”⁵⁶ He reduces the paradigm to a single premise, “the sequence of peace-crisis-war-resolution, which will result in peace again” and identifies war as the deciding factor.⁵⁷ The paradigm and the resulting sequence are the driving factors that shape the design of conventional forces around the globe. General Smith identifies four common attributes of conventional forces that nation-states field, “an organized military body, a hierarchical structure answerable to the highest in the entity or the state, a legal status to bear arms and to have a separate disciplinary code, and centralized funding for the purchase of warlike materiel.”⁵⁸ The application of these common attributes to resources available and a consideration of the most likely threat lead to the basic form of a nation’s conventional forces – typically some combination of land, naval, and air forces.

⁵⁴Rupert Smith, *The Utility of Force: The Art of War in the Modern World*, (New York, New: Alfred A. Knopf, 2007) 3.

⁵⁵*Ibid.*, 4

⁵⁶*Ibid.*, 19.

⁵⁷*Ibid.*

The United States military seeks an asymmetric advantage in conventional warfare against all potential adversaries. This desire, balanced by resources available, leads to a high-tech approach to warfare that relies more on machines than it does manpower. As the capability of military equipment and technologies increase, the definition Mass has evolved. The original concept of a weighted concentration of brute force at a single point has now become “concentrating the effects of combat power at the decisive place and time.”⁵⁹ What has allowed this approach to warfare and the evolution of the definition of Mass are theory, doctrine, and Tactics, Techniques and Procedures (TTP). As discussed above, the theories underpinning this approach are largely those of Clausewitz and Jomini. Relevant doctrinal concepts derived from these theories are Campaign Planning, the Elements of Operational Design, the Joint Operational Planning Process (JOPP), and Military Decision Making Planning Process (MDMP).

The high-tech forces of the United States are unquestionably without peer on the conventional battlefield. This fact forces potential adversaries to focus on alternate means to confront the United States and pursue their interests around the globe. As discussed in the System Framing discourse, changes to the global environment have increased the effectiveness of these approaches and hastened the rise in power of the non-state actor. This rise in power calls into question the continued validity of the interstate industrial age warfare paradigm. The question becomes, would a different definition of war and a new approach, or paradigm for warfare, enable the United States to gain an advantage over non-state actors while retaining its advantage over the conventional forces of nation-states?

Non-state actors, specifically Al Qaeda, do not field conventional forces. They simply lack the resources (personnel and material) required. Therefore, they resort to asymmetric means to counter the conventional forces of the nation-state. The term asymmetric in this context means to employ unconventional methods against perceived weaknesses in an opponent. In recent

⁵⁸Ibid., 10.

years, Al Qaeda has become synonymous with terrorism. While terrorism is the primary means through which Al Qaeda attacks its enemies, they employ Swarming as an enabling tactic.

Sean J. A. Edward's refined definition of Swarming (locate, converge, attack, and disperse) closely resembles the analysis of Al Qaeda attacks performed by Rohan Gunaratna in his book, *Inside Al Qaeda: Global Network of Terror*:

Most Al Qaeda attacks involve three distinct phases. First, intelligence teams mount surveillance...Next an Al Qaeda support team arrives in the target area and organizes safe houses and vehicles, bringing with it the necessary weapons and explosives. Lastly, Al Qaeda's strike team arrives and withdraws after completing the mission, unless it is a suicide attack.⁶⁰

Arquilla and Ronfeldt clearly indicate, and Edward's historical analysis confirms, Swarming is most prevalent as an asymmetric tactic on a conventional field of battle. However, application of Edward's conceptual template for swarming to Gunaratna's analysis of an Al Qaeda terrorist attack demonstrates that Swarming applies across the full spectrum of conflict.

There are many contemporary examples of Al Qaeda conventional style Swarming attacks. Bunker and Begert cite the ambush of civilian contractors in Fallujah, Iraq on 31 March 2004 and the multiple wave attacks in Riyadh, Saudi Arabia in May 2003 as examples of Al Qaeda Swarming attacks. Additional examples are the Gardez, Afghanistan operations in February to March 2002 in the months following the US assault on Tora Bora.⁶¹ Two primary examples of terrorist style swarming attacks conducted by Al Qaeda are the attacks on the United States conducted on 11 September 2001, and the Madrid Train Bombing on 11 March 2004.

In these examples, a networked structure, the ability to "swarm" attackers to the battlefield, and the ability to rapidly disperse after the attack, enabled Al Qaeda to generate Mass in two distinct forms. First, the concentration of brute force at a single point (Fallujah, Riyadh, and the United States); and second, the concentration of the effects of combat power at a decisive

⁵⁹FM 3-0, Operations (Washington D.C.: Department of Defense, 2001) 4-13.

⁶⁰Rohan Gunaratna, *Inside Al Qaeda: Global Network of Terror*, (New York: Columbia University Press, 2002) 77.

⁶¹Bunker and Begert, 156.

place and time (Gardez, Madrid, and the United States). In each case, Al Qaeda translated the Mass generated by Swarming tactics into an asymmetric advantage over technologically superior opponents. Other networked organizations are also adopting this approach to war. The best example is the Hezbollah attacks against Israel in the summer of 2006. Another example is the repeated attacks of the Iraqi Insurgent organizations against the US Coalition in Iraq 2004-present, specifically evidenced in the two battles for the city of Fallujah. Thus, this type of Swarming tactic has become a successful template for combat against a technologically superior conventional force, again helping the non-state actor to achieve Mass.

The Economic Instrument

Since the industrial revolution, the United States has relied predominantly on its national market as a source of economic strength. Four factors affect the strength of an industrial age economy. The first factor is the availability (quantity and quality) of natural resources, typically, wood, coal, steel, and textiles. The second factor is the development of an adequate transportation infrastructure combined with an increased shipping capacity (ground, sea, and eventually, air). Transportation infrastructure matures with the economy, from roads and rivers, to railroads, canals, interstate highways, seaports and airports. The third factor is the size and capability of the workforce, where capability is a function of skill level and education. The last factor is the technological capability of the society. Throughout the industrial age technological innovations moved society from a reliance on manpower to that of machines; for example: the cotton gin, steam engine, assembly line, internal combustion engine, and eventually the fully automated assembly line. These factors work in concert over time to expand a market from a predominantly local footing to a regional, then national, and finally, an international footing when the economy reaches maturity. In an effort to avoid stagnation with a mature national market, the United States, and subsequently most fully developed nations, abandoned the industrial age

economic paradigm to embrace the potential of a new information age paradigm that promises economic Mass via a limitless market, i.e. Globalization.

In his seminal work, *The Lexus and the Olive Tree: Understanding Globalization*, Thomas L. Freedman defines globalization, describes its impact on the system of nation-states, and provides specific insights into the economic implications of Globalization:

I define globalization this way: it is the inexorable integration of markets, nation-states and technologies to a degree never witnessed before...The driving idea behind globalization is free-market capitalism – the more you let market forces rule and the more you open your economy to free trade and competition, the more efficient and flourishing your economy will be. Globalization means the spread of free market capitalism to virtually every country in the world. Therefore, globalization also has its own set of economic rules – rules that revolve around opening, deregulating and privatizing your economy, in order to make it more competitive and attractive to foreign investment...Globalization has its own defining technologies: computerization, miniaturization, digitization, satellite communications, fiber optics and the internet, which reinforce its defining perspective of integration.⁶²

In essence, Freedman describes a Khunian paradigm shift. The old paradigm of industrial age economies, reliant on the assembly line and mass production is replaced by Globalization where competition, free-market economic principles, and Moore's law reign supreme.

The United States and the “Western world” are on the bow wave of this paradigm shift with the rest of the world trying to play catch up. In his book, *The Pentagon's New Map*, Thomas Barnet proposes a theory to explain the impact of Globalization on the international security environment. Barnet's “core and non-integrating gap theory” accurately portrays the economic realities of the paradigm shift, and explains how these realities affect non-state actors:

The real asymmetrical challenge we will face will come from globalization's disenfranchised, or the losers largely left behind in the states most disconnected from globalization's advance. The main thrust of this challenge will be led by educated elites, like an Osama bin Laden, who dream of disconnecting societies from globalization's grasp.⁶³

⁶²Thomas L. Freedman, *The Lexus and the Olive Tree: Understanding Globalization*, (New York: Anchor Books, 2000) 9.

⁶³Thomas P. M. Barnet, *The Pentagon's New Map*, (New York: Berkley Books, 2004) 93.

Mark Galeotti argues that the criminal underworld, composed of non-state actors, is experiencing trends in Globalization similar to the legitimate world of the nation-state. He states that the annual turnover of the global criminal economy is estimated “very roughly” at one trillion dollars, of which narcotics may account for about half. Additionally, up to half a trillion dollars are laundered through the world’s financial systems every year.⁶⁴ Rohan Gunaratna analyzes the Al Qaeda financial network in his book, *Inside Al Qaeda*. Gunaratna outlines a vast financial network comprised of front companies, legitimate banking institutions, NGO’s, private donors, and even state sponsors, who work to support the Al Qaeda network. He states that the organization financial system is very complex and comparing it to other organizations provides clarity, “...Al Qaeda can also be conceptualized as a holding company and its associate Islamist groups as its subsidiaries, with Al Qaeda providing the venture capital.”⁶⁵

Gunaratna contends that the attacks of September 11 were the most expensive ever launched by Al Qaeda and that they cost less than \$500,000.⁶⁶ These figures are a startling example of asymmetry. Al Qaeda’s most expensive operation cost considerably less than one main battle tank. Gunaratna points out that Al Qaeda is aware of this asymmetry. He states, “Unlike most terrorist groups, Al Qaeda is mindful of the social and economic costs of its attacks.”⁶⁷ Gunaratna supports this assertion by citing a transcript of an Al Jazeera interview with Bin Laden in which the latter attempts to sum up the varying economic effects of the September 11 attacks on the United States. Bin Laden’s arithmetic and questionable logic lead him to an estimated cost of one trillion dollars.⁶⁸ Whether you agree with Bin Laden’s conclusion is beside the point; it is safe to say that the economic costs of the September 11 attacks, and the US response to them (Operation Enduring Freedom, Operation Iraqi Freedom,

⁶⁴Galeotti, 29.

⁶⁵Gunaratna, 69.

⁶⁶Ibid., 64.

⁶⁷Ibid., 225.

⁶⁸Ibid., 225-226.

and the creation of the Department of Homeland Security) are an order of magnitude greater than \$500,000. This economic asymmetry, caused by the response to a tactical action, represents a significant problem to the United States if it is truly engaged in a “Long War”. Indeed, future attacks against the United States are as likely to be conducted for their economic impact, as they are to produce casualties.

Analysis

The System Frame and Rival as Rational discourses are non-invasive observations of the system and its problematic emergence. These observations generate shared common understanding of the system and enable the design team to theorize about its nature. The purpose of these observations is to identify areas that may prove fruitful for invasive investigation and to generate concrete knowledge of the system’s true nature. The Operational Framing discourse determines the actions that constitute this invasive investigation. The act of performing an invasive investigation will move the system in some direction. In theory, the knowledge gained by observing the direction the system moves enables the design team to move the system in a desired direction through further, informed, action. Thus, the exploitation of knowledge moves the system towards a desired direction or state. The Rival as Rational discourse highlights several areas that may bear fruit for this endeavor.

In the example here, the desired direction for the system is toward a state of dynamic stability where the strategic advantage rests with the collective of nation-states and where the rule of law regulates their actions. It is important to note that there is a broad range of potentials for the system that encompass this condition. It is not important which potential within this range the system achieves; it is only important that it realize one. This is a significant difference between SOD and the Elements of Operational Design. The Elements of Operational Design seek to manufacture or impose a specific solution to a given complex problem. SOD acknowledges that, there are logical problems with the concept of causality; therefore, it is impossible to impose a

solution upon a complex problem involving an open system. SOD merely attempts to move the system towards an acceptable range of potential solutions to a problem. While some potential solutions are clearly more desirable than others, they are all more desirable than the current state of the system.

Four areas within the Rival as Rationale discourse show enough potential for increased knowledge to warrant invasive investigation. First is Al Qaeda's dependence on insurgency theory and information operations at the operational level to translate action at the tactical level into strategic effects. Second is the use of Swarming as a tactical form of maneuver to compensate for a lack of a conventional force structure. Third is Al Qaeda's dependency on the notion of "internal legitimacy". Last, their use of on the legitimate international banking system to launder and transfer money generated through illegitimate means to create economic Mass. These four areas are carried from the Rival as Rational discourse to the Command as Rational discourse for consideration and further examination.

The comparative analysis of how nation-states and non-state actors achieve Mass across the DIME demonstrates the Principle's dynamic nature and enduring value. The Rival discourse examined actions to achieve Mass across the DIME in isolation. However, in practice, actions in one area of the DIME affect all other areas. This adds to the complexity of the environment. In this complexity lies the true problem for the nation-state. The problem is pressure.

The non-state actor, utilizing inherently unpredictable swarming tactics, can choose the time, place, and nature of any confrontation. These acts cause the environment to exert a synergistic pressure on the nation-state. The dampening mechanisms of the nation-state are ill-equipped to compensate for this pressure. In essence, by the very nature of the way a non-state actor achieves Mass at the tactical level, it acts at the strategic level faster than a nation-state can respond.

A final point to highlight from the Rival as Rational discourse is that it is not just about the Rival. The design team learns just as much about their system as they do about the Rival. A

deeper understanding of the friendly system illuminates potentials for change to the friendly system that could move the larger system towards the desired state.

CH 3: COMMAND AS RATIONALE: SUPPORTING THE RULE OF LAW

The Command as Rationale discourse “is a consideration of current command structures and a determination of whether or not they suit the logic of the system frame.”⁶⁹ The principal themes for the Command as Rationale discourse, outlined by Dr. Naveh, are, Learning Challenges – Differential Gaps, Interfacing with National Command Authority, Interfacing with Warfighting Commanders, Organizational Architecture, and Staff Arrangements.⁷⁰ The discourse for Command as Rationale must consider these themes, but it must also consider the areas from the Rival as Rationale discourse identified as candidates for invasive intervention, thereby ensuring that the Organizational Architecture possesses sufficient capability to meet the Commander’s intent.

Fighting Terrorism: The Criminal Approach vs. The War Approach

A closer look at the four areas from the Rival as Rationale discourse that warrant invasive investigation reveals a common theme. The theme is the requirement that a non-state actor obtain legitimacy, not from external sources, but from within the support base. Neal A. Pollard describes the implications of this need for internal legitimacy in his monograph, “Globalization’s Bastards: Illegitimate Non-State Actors in International Law.” “Terrorist groups outright reject the status quo of the international system – and thus, its very claim to legitimacy – and seek to replace it with political structures they deem are more legitimate and consistent with their worldview and values.”⁷¹

Given this desire for legitimacy and the fact that an insurgency requires at least tacit support of the people in the established sanctuary, it follows that any invasive investigation of the

⁶⁹Sorrels Et Al, 25.

⁷⁰Shimon Naveh, *Systemic Operational Design –Update*, Operational Command Seminar Reference Book, (Ft. Leavenworth, KS: 16-26 January 2007) Tab D.

system should reinforce the primacy of the rule of law as a means to deny terrorist organizations legitimacy and the support it garners. Supporting the rule of law is an indirect way to challenge, and ultimately change, the belief systems of those who would support terrorists or employ terrorism as a means to a political end. This approach emphasizes terrorism as a criminal act.

An alternative is to declare war against terrorism. In his book, *The Ethic of War and Peace: An Introduction to Legal and Moral Issues*, Paul Christopher explains the Just War Tradition and the process by which a Democracy embarks on the path to war. “A decision to resort to force proceeds in two parts. First, is the use of force permissible according to international law and the Just War Tradition? Even if it is permissible (i.e., justified), there is the further question of whether it is prudent.”⁷² As evidenced by the eventual declaration of the “Global War on Terrorism”, President Bush and his advisors determined that in response to the September 11th attacks, war was justified and prudent. Such a decision is not taken lightly, but only after due diligence is paid to all relevant factors – most notably the concepts underpinning *jus ad bellum*. There is much debate in the academic community over this declaration of war. The debate centers on interpretation of international law and the Just War Theory’s requirement of legitimate authority, which indicates that wars are fought between states.⁷³

Given the nature of the emergence discussed during the System Frame and the commonly accepted definition of war as a continuation of politics by other means by implicitly legitimate actors, it is possible to argue that a declaration of war is counter productive as it confers legitimacy on the non-state actor and its use of terrorism to accomplish its goals. This legitimacy, however, need not be real; mere perception of it by any group within the system undermines the

⁷¹Neal A. Pollard, *Globalizations Bastards: Illegitimate Non-State Actors in International Law*, in *Networks, Terrorism and Global Insurgency*, Ed. Robert J. Bunker, (New York: Routledge, 2005) 54.

⁷²Paul Christopher, *The Ethics of War and Peace: An Introduction to Legal and Moral Issues*, 3rd Edition, (Upper Saddle River: Pearson, 2004) 193.

⁷³Lorraine Besser-Jones, *Just War Theory, Legitimate Authority, and the “War” on Terror*, in *Philosophy 9/11: Thinking about the War on Terrorism*, Edited by Timothy Shanahan (Chicago: Open Court Publishing Company, 2005) 131.

rule of law. Therefore, the Command as Rationale discourse examines an Organizational Architecture that enables actions across a broad spectrum that reinforces the rule of law and stops short of a declaration of war. This decision influences the remaining themes of the discourse.

In his article, “Is Development an Effective Way to Fight Terrorism,” Lloyd Dumas provides several alternatives to a declaration of war on terrorism. He concludes, “In the short run, high-quality intelligence gathering and police work are critical. But in the long run, encouraging economic and political development is the single most effective counter-terrorist approach.”⁷⁴ This notion of a short term policing solution and a long-term environmental solution has potential and warrants further investigation. Additionally, a visible short-term approach satisfies the psychological need to respond immediately and therefore, generates greater freedom of action for long-term solutions by relieving political pressure without conferring legitimacy to the non-state actor by a declaration of war.

Policing the Environment

The first question a discourse on Organizational Architecture for a short term policing action against terrorism must ask is: are the current policing capabilities in the international community sufficient? The simple answer is that they are not. In the afterward to their book, *Networks and Netwars: The Future of Terror, Crime and Militancy*, John Arquilla and David Ronfeldt discuss the type of capabilities required for the fight to counter global terrorism, and the difficulty of transforming current organizations to meet the demands of a changed security environment. “A particular Challenge for the cumbersome American bureaucracy will be to encourage deep, all-channel networking among the military, law enforcement, and intelligence

⁷⁴Lloyd J. Dumas, “Is Development an Effective Way to Fight Terrorism?,” In *War after September 11*, Edited by Verna V. Gehring (Lanham: Rowman & Littlefield Publishers, Inc., 2003) 73.

elements whose collaboration is crucial for achieving success.”⁷⁵ Because the current organizational structures are inadequate, we turn to the question of what is needed.

Interpol is the world’s largest international police organization composed of 186 member countries. As such, it is a logical place to start when building a model for global law enforcement capability. Interpol “facilitates cross-border police co-operation, and supports and assists all organizations, authorities and services whose mission is to prevent or combat international crime.”⁷⁶ In the wake of the September 11th attacks, the Secretary General of Interpol realized the need for a fusion cell to identify active terrorist groups and their membership; solicit, collect and share information and intelligence; provide analytical support; and enhance the capacity of member countries to address the threats of terrorism and organized crime. The Interpol Fusion Task Force established in September of 2002 carries this charter.

While Interpol and the Fusion Task Force seem well suited to the task, some drawbacks must be considered. First, the Interpol constitution prohibits “any intervention or activities of a political, military, religious or racial character.”⁷⁷ Second, Interpol is a coordinating agency without an established jurisdiction. Interpol fights international crime by processing information and passing it to member nations for action. This adds bureaucratic layers to the process in a time-sensitive environment. Third, there are varying degrees of capability and corruption within the police forces and governments of the member nations of Interpol. These variances reduce Interpol’s ability to influence the fight against terrorism. Finally, there is no international clearinghouse for prosecution of terrorists or criminals, the International Criminal Court may evolve into such an entity, but it does not serve this purpose today. Terrorists or criminals are

⁷⁵John Arquilla, and David Ronfeldt, *Afterward (September 2001): The Sharpening Fight for the Future*, in *Networks and Netwars*, Edited by John Arquilla and David Ronfeldt, (Santa Monica: RAND, 2001) 364.

⁷⁶Interpol Homepage, [Webpage Online] available from <<http://www.interpol.int/public/icpo/default.asp>>, accessed 6 FEB 07.

⁷⁷Ibid.

tried under the law of the country where they are captured unless there is a request for extradition to another country, and that request is approved.

Of the drawbacks listed above, Interpol's constitutional prohibition against activities of a military nature is the most significant. The prohibition enables Interpol to function effectively in the current environment, but it significantly limits the organization's utility when the military nature of the Rival is considered. A primary assumption of the Command as Rationale discourse is that the Organizational Architecture will require a significant military capability. This capability is required in order to ensure law enforcement officials have the ability to fight their way in to austere or hostile environments to execute search and arrest warrants. The Logistics as Rationale discourse will investigate potential solutions to this problem. Either an amendment to the Interpol constitution enabling direct liaison and coordination with military forces, or a new organization must be created with military and police capability that has access to information generated by Interpol, is required. Finally, if Interpol, augmented with appropriate military capability, is to be the lead agency for a global counter terrorism campaign, significant coordination measures and mechanisms are required to facilitate multilateral military operations. Therefore, appropriate experts must work out these mechanisms during the Logistics as Rationale discourse.

There are many advantages to utilizing the Interpol structure. First, Interpol is an international organization with a large membership and significant degree of legitimacy. This legitimacy can be leveraged to increase participation in a global counterterrorism campaign. Additionally, this campaign must have an international persona versus an American face. Second, Interpol already has a command and control structure with robust data processing capabilities. Third, Interpol has organized its counter terrorism activities into two global, and four regional initiatives. This division enables Interpol's Fusion Task Force to establish regional teams operating on a "multi-disciplinary methodology" to conduct terrorism-related investigations. These divisions also constitute logical coordination points between Interpol and

the regionally aligned US Combatant Commands. Special Operations Command is the logical lead for the US military effort, and as such, it would coordinate with Interpol's global initiative. Last, Interpol already has established relations and agreements with its member nations.

These advantages have a synergistic effect, which makes Interpol nearly a plug and play option for countering terrorism on a global scale. For these reasons, the recommendation from the Command as Rational discourse is to establish Interpol as the lead agency in a global counter terrorism campaign. The Logistics as Rationale discourse will investigate the technical and legal implications of this recommendation to determine its ultimate feasibility.

Changing Environmental Conditions

As discussed in the analysis to the Rival as Rational discourse, a deeper understanding of the friendly system illuminates potentials for change that may affect the entire system. Areas where change to the nation-state system could undermine the rise in power of non-state actors are (1) international law, as it relates to state sponsorship of terrorism, and (2) sovereignty, as it relates to economic and political growth in developing or weak nations.

Neal Pollard argues that international law needs new tools to counter the influence of illegal non-state actors on the international system. He contends that these tools should recognize “the role of transnational terrorist enterprise and its constituent participants and processes within international politics. One of these constituent participants is the state sponsor.”⁷⁸ Pollard explains that most terrorist activity violates either customary law, or a variety of international antiterrorism conventions. However, he identifies areas that are not explicitly covered by law, “critical support activities, such as financing, weapons proliferation, recruitment, or providing real estate for training camps at best implicate different areas of customary law, if any.”⁷⁹ In principle, a change to international law that better defines state sponsorship of terrorism and

⁷⁸Pollard, 41.

⁷⁹Ibid., 56.

establishes strict consequences for nations that sponsor terrorism could move the system towards a desired state. Such measures, therefore, warrant further investigation by legal experts and consideration during Operational Framing.

In his thought provoking article, “The Paradox of International Action,” Francis Fukuyama charges, “The world today lacks effective international institutions that can confer legitimacy on collective action.”⁸⁰ He believes that to solve the problem of effective and legitimate action new institutions are required and American foreign policy should, “promote the creation of an array of overlapping and sometimes competitive international institutions.”⁸¹ Fukuyama contends there are many highly effective international regulatory bodies that exist outside the structure of the United Nations. These regulatory bodies are responsible for everything from “bank settlements to communications protocols to safety standards to internet domain names.”⁸²

Creating effective international regulatory bodies outside the existing structure of the UN may assist with improving economic and political development in weak states, thereby reducing the appeal of the non-state actor such as Al Qaeda. Fukuyama identifies one potential solution: Shared Sovereignty. According to Fukuyama, under Shared Sovereignty, “...states accept long-term help from the international community to provide certain basic governance services – importing good governance, in effect from jurisdictions where it exists.”⁸³ The precedent for this concept is the Chad-Cameroon gas pipeline. The government of Chad agreed to put expected energy revenues into a trust fund, administered by the World Bank, because the government determined that it was not capable of investing the funds itself without undue influence and

⁸⁰Francis Fukuyama, “The paradox of International Action,” In *The American Interest*, Spring 2006, 7.

⁸¹*Ibid.*, 8.

⁸²*Ibid.*

⁸³*Ibid.*, 18.

corruption from internal forces.⁸⁴ The decision appears to weaken the sovereignty of Chad. However, the long-term stability generated by avoiding corruption, strengthens the rule of law and ultimately, the sovereignty of the Government. There is much promise in this approach.

Analysis

Both the short and long-term approaches addressed during this discourse target the underlying problem identified during the System Frame and Rival as Rationale discourses. The rise in power of the non-state actor, which threatens the state monopoly on the ability to wield the Instruments of National Power, undermines the rule of law. The ultimate goal of the approaches considered during the discourse is to return acts of terrorism to the level of crime, thereby depriving the non-state actor of legitimacy and reinforcing the supremacy of the rule of law.

Mark Galeotti's concept of Enforcement Drivers is significant. The likelihood of producing counter-productive effects when injecting energy into the system to effect long-term environmental change is great. Early identification of negative trends must be the centerpiece of the learning processes built into the command structure. A tenet of SOD is its emphasis on learning, as learning informs future action. Therefore, the organizational architecture, staff arrangements, and programmed interaction with the National Command Authority derivative from the Command as Rationale discourse must form a learning process characterized by reflective thought, flexibility and innovation.

Bringing terrorists, their organizations, and those who support them to justice is not enough to transform the system to a desired state. The path to the desired state likely entails eliminating the conditions that make terrorism an attractive alternative to legitimate political discourse. This requires significant transformation of the global geopolitical environment – notably changes to international law concerning terrorism and improving conditions in

⁸⁴Ibid.

developing and weak states so that people and organizations choose legitimate forms of discourse rather than violence as a means to achieve a political end. Admittedly, this is a significant undertaking, accomplished over decades not years. Regardless, it is one worth attempting.

CH 4: LOGISTICS AS RATIONALE: THE ART OF THE POSSIBLE

The principal themes for the Logistics as Rationale discourse are: Learning Challenges – Structural Gaps, System Mobilization (campaign potential), System Deployability (operation boundaries), System Sustainment, and Control Arrangements.⁸⁵ Due to the limited scope of this monograph, this discourse will not investigate each of these themes, but will focus on System Mobilization. Under the theme of System Mobilization Dr. Naveh asks the question, what system of logistical conditions must be set in order to assure potential for the application of a system of operations (campaign) capable of transforming the constellation in compliance with our strategic interests.⁸⁶ The attempt of the narrative to answer this question highlights how the Logistics as Rationale discourse is applied to the problem identified during the System Frame.

A Conceptual Framework for Identifying Logistical Requirements

The February 2003 US National Strategy for Combating Terrorism outlines the “way ahead” in the GWOT. The document does not specifically state the conflict termination criteria, but they are implicit in the statement of the strategic goal for the war on terror: “Our goal will be reached when Americans and other civilized people around the world can lead their lives free of fear from terrorist attacks.”⁸⁷ The strategy then “operationalizes” the concept when it specifies the endstate, “Return Terrorism to the Criminal Domain;” a process accomplished by reducing the scope and capability of terrorist organizations over time.⁸⁸ The strategy and operational endstate are sound; the challenge is in connecting the means to the ends in a resource-constrained environment. The Logistics as Rationale discourse helps the design team identify innovative ways to apply the available means to accomplish their desired ends.

⁸⁵Shimon Naveh, *Systemic Operational Design –Update*, Operational Command Seminar Reference Book, (Ft. Leavenworth, KS: 16-26 January 2007) Tab D.

⁸⁶Ibid.

⁸⁷George W. Bush, The National Strategy for Combating Terrorism, [posted online] available at <<http://www.whitehouse.gov/news/releases/2003/02/20030214-7.html>>; internet, accessed 20 FEB 07, 1.

The United States National Strategy for Combating Terrorism outlines a conceptual framework for engaging other nations for the purpose of combating terrorism:

Where states are willing and able, we will reinvigorate old partnerships and forge new ones to combat terrorism and coordinate our actions...Where states are weak but willing, we will support them vigorously in their efforts to build the institutions and capabilities needed...Where states are reluctant, we will work with our partners to convince them to change course and meet their international obligations. Where states are unwilling, we will act decisively to counter the threat they pose...to compel them to cease supporting terrorism.⁸⁹

Borrowing this framework - willing and able, willing and weak, reluctant, and unwilling - enables the design team to categorize nations for analysis to determine each nation-state's unique requirements and establish a priority of effort. Priority of effort enables the design team to allocate limited resources in the most effective manner. During the Rival as Rational discourse, the design team discovered that the Rival employs Insurgency Theory at the Operational level to accomplish its political aims. It follows that turning to Counterinsurgency may prove fruitful. The GWOT planners seemingly did not make this logical connection as they conducted Campaign Planning. Therein lies one significant difference with the application of SOD at the Operational level.

David Galula outlines four laws and numerous related Principles for the conduct of counterinsurgency warfare in his book, *Counterinsurgency Warfare Theory and Practice*. His second law, "Support is gained through an active minority,"⁹⁰ provides a workable model for establishing priority of effort in the counterterrorism campaign. Galula explains: "In any situation, whatever the cause, there will be an active minority for the cause, a neutral majority, and an active minority against the cause."⁹¹ Both the insurgent and the counterinsurgent vie for the support of the neutral majority. Applying this tenet to the discourse framework establishes that the "minority for the cause" are the "willing and able" and "willing and weak" states; the

⁸⁸Ibid., 13.

⁸⁹Ibid., 12.

⁹⁰Dvid Galula, *Counterinsurgency Warfare: Theory and Practice*, (New York: Fredrick A. Praeger Publishers, 1964) 75.

“neutral majority” is composed of the “reluctant” states while the “minority against the cause” is all “unwilling” states. Following Galula’s premise, the discourse team should rely on the “minority for the cause” to influence the “neutral majority.” Of those states that compose the “minority for the cause,” it makes most sense to bolster the “willing and weak” states. Fukuyama’s concept of Shared Sovereignty shows promise as a method for bolstering “willing and weak” states. Before progressing, an explanation of sovereignty in the context of the GWOT is required.

The 2003 National Strategy for Combating Terrorism declares that: “States that have sovereign rights also have sovereign responsibilities.”⁹² For the war on terrorism, UNSCR 1373 and a myriad of international protocols articulate these responsibilities. In summary, states are responsible for “a spectrum of activities, including suppressing and freezing terrorist financing, prohibiting their nationals from financially supporting terrorists, denying safe haven, and taking steps to prevent the movement of terrorists.”⁹³ In theory, if each state policed terrorism within its own borders, terrorism would cease to exist. In practice, the water is muddy. “Willing and weak,” “reluctant,” and “unwilling” states constitute the mud in the water. These states are unable, or unwilling, to police terrorist organizations within their borders.

Under the concept of Shared Sovereignty, programs for military and police assistance, economic aid, and assistance with governance will help clear the waters. Through aid given by such programs, the “willing and weak” states will be able to police terrorism within their borders while simultaneously reducing the conditions that foster it. In his article “The ‘War on Terrorism’ and the United Nations,” Ramesh Thakur describes a development-security nexus where “poverty and destitution can produce feelings of desperation and alienation and thus

⁹¹Ibid., 75-76.

⁹²Bush, “The National Strategy for Combating Terrorism” 19.

⁹³Ibid., 19.

become an incubator of terrorism.”⁹⁴ The 2003 National Strategy for Combating Terrorism also outlines the conditions that foster terrorism: poverty, corruption, religious conflict, and ethnic strife.⁹⁵

Applying Shared Sovereignty to the short-term policing approach outlined in the Command as Rationale discourse leads to a focus on expanding aid programs already in existence. There is extensive experience, expertise, and infrastructure for these types of assistance programs. Providing policing assistance through Interpol, and providing military, economic, and governance assistance through the United States, the North Atlantic Treaty Organization, the European Union, and the United Nations or private contractors are each viable options. Sharing the burden between these organizations gives the campaign an international persona and dramatically increases its legitimacy. The fact that the priority of effort is given to “willing and weak” states further legitimizes the enterprise because the grant of assistance is in response to a formal request for that assistance. In the long-term, these programs will strengthen governance and increase the capacity of the state. Increased capacity enables the states to live up to the obligations of sovereignty in the eyes of their people and the international community. It also helps encourage the “reluctant” states to come “off the fence” so they may receive similar assistance. Finally, providing robust military and police assistance programs to nations in need will have an immediate impact on terrorist activity in those states, thereby alleviating the political pressure on the United States to act in a more aggressive manner. This reduction in political pressure, in turn, generates the time required to implement long-term measures through informed action.

Applying Shared Sovereignty to the long-term environmental approach leads to an emphasis on updating legal and political regimes. The most pressing environmental change is a

⁹⁴Ramesh Thakur, “The ‘War on Terrorism’ and the United Nations,” [article online], available at, <<http://www.unu.edu/hq/japanese/gs-j/gs2003j/shonan19/thakur-ab-e.pdf>>; accessed 27 FEB 07. 2.

⁹⁵Bush, “The National Strategy for Combating Terrorism” 6.

legal program that strengthens the consequences of state sponsorship of terrorism. In her article, “Arresting Terrorism: Criminal Jurisdiction and International Relations,” Madeline Morris outlines the problem with criminal jurisdiction surrounding international terrorism as it relates to state sponsorship. Morris argues:

In this respect, the terrorism treaties, with their “prosecute-or-extradite” systems for jurisdiction, have a built-in limitation: they do not provide for the foreseeable circumstance in which the crime was in fact sponsored by the State that has custody of the suspect.⁹⁶

Recognition of this defect in international law causes many experts to call for some form of supra-national entity that will arbitrate disputes between states. Morris concludes that prosecution of terrorism will remain at the national level because efforts to internationalize law enforcement through the international criminal courts, universal jurisdiction, or UN Security Council powers are limited in scope and efficacy by the political features of international terrorism.”⁹⁷

Neal Pollard provides a counter point to Morris’ contention. He offers a method by which the international community could develop better instruments:

Holding state sponsors accountable requires more sophisticated tools – economic, political and diplomatic – than rogue state lists and UN Security Council resolutions. There must be more responses to terrorism than extradition and military attack. Forms such as the World Trade Organization, International Monetary Fund and regional trade blocs – not traditional forms for security issues – provide a fertile ground for considering new instruments to hold states and even multinational organizations accountable for varying and complex levels of terrorist sponsorship.⁹⁸

The notion underpinning Pollard’s fertile ground for improving international law with respect to terrorism blends well with Fukuyama’s concept of promoting an array of overlapping and competitive international institutions to regulate effective and legitimate international action.⁹⁹

⁹⁶Madeline Morris, “Prosecuting Terrorism: The Quandaries of Criminal Jurisdiction” [article online] available at <<http://www.law.duke.edu/magazine/2005spring/features/morris.html?linker=2>>; internet; accessed 26 FEB 07.

⁹⁷Ibid

⁹⁸Pollard, 65.

⁹⁹Fukuyama, 7-9.

It is clear that the concept of Shared Sovereignty holds promise in both the short and long-term. Improving conditions in the “willing and weak” states has two potential benefits in the short-term. First, terrorist organizations will have less freedom of action around the globe. Second, according to Galula’s second law, the visible benefits of actively supporting the global counterterrorism campaign will entice “reluctant” states from the neutral majority to support the campaign. This is an indirect approach to solving the problems created by reluctant states. As the number of neutral states declines and the number of “willing” states increases, the “unwilling” states become increasingly isolated. Contrast the potential of this approach with that of the GWOT planners, who used the Elements of Operational Design, focused directly on the problem presented by unwilling states, and chose a direct and kinetic solution. The number of “reluctant” states has increased in the aftermath of this approach. A critical requirement of the Shared Sovereignty approach is a new and universally accepted definition of terrorism over the long-term. This definition must be holistic in nature, encompassing the issue of sponsorship, and it must put to rest the question of whether terrorism is an act of war or a mere criminal act. Building on this foundation, a new body of international law designed to suppress terrorism by prosecuting those entities that support it becomes possible. Shared Sovereignty requires legitimacy as much as any tangible resource.

Returning to the original question of this discourse, what system of logistical conditions must be set in order to assure potential for a campaign capable of transforming the constellation in compliance with our strategic interests, the answer is a holistic definition of terrorism that holds entities that sponsor terrorism accountable to the law. This logically leads to new body of international law that protects the sovereign rights of states, but mandates punishment for crimes against all of humanity, and backs up that mandate with punishment from the appropriate jurisdiction. Additionally, we must affirmatively engage in a multi-national effort to establish an exportable program of Shared Sovereignty capabilities – military, police, economic, and governance – provided by the international community to countries who are willing to combat

terrorism within their borders, but are themselves unable to do so without assistance. All of these logistical requirements have three things in common: isolating those nation-states who support terrorism from the rest of the international community, reinforcing the supremacy of the rule of law, and depriving non-state actors who engage in terrorism the legitimacy they need to continue their attacks.

Analysis

This limited exploration of one of Dr. Naveh's principal themes for the Logistics as Rationale discourse shows how this particular discourse, more than any other, moves the inquiry from the abstract realm of systems theory towards the concrete world of the possible.

The simulated Logistics and Rationale discourse illuminates a critical difference between SOD and the Elements of Operational Design. Through some mechanism in their planning process, the GWOT Operational planners failed to see or grasp the true nature of the enemy – an insurgency. Therefore, they focused on a kinetic response to terrorist networks and those who support them. This focus has the effect of undermining the rule of law. In contrast, each discourse in SOD encourages the design team to question what they think they know and to re-evaluate their assumptions continually. The application of the SOD process to the problem enables planners to see a different solution intuitively. The focus on Galula's theory for Counterinsurgency emerges from a shared understanding of the problem. The application of Galula's theory leads down the logical path of supporting the willing but unable states to win over the reluctant states and isolate the unwilling states. This strategy inherently supports the rule of law.

CH 5: OPERATIONAL FRAMING: THE ART OF COMMAND

The Operational Frame differs from the other discourses of SOD in that it transforms abstract constructs into operational realities bound by the logic of the System Frame, The actions of the Rival, and the realm of the possible as viewed through the lens of Command as Rationale and Logistics as Rationale. This box expresses the Commander's visualization of the battlefield, as informed by the SOD discourses, and enables planners to implement measures to investigate, and ultimately transform, the system through an iterative cycle of learning through action. The principal themes for the Operational Framing discourse are: Learning Problematization – Operational Heuristics, Terminating Configuration, Systemic Shock Manifestation, Time Constitution, Space Production, System of Operational Functions, and Forms of Maneuver.¹⁰⁰ This chapter explores the potential of SOD by contrasting how SOD and the Elements of Operational Design each inform the process of Battle Command as outlined in current doctrine. FM 3-0, Operations, defines and describes Battle Command as:

*the exercise of command in operations against a hostile, thinking enemy...*The art of command lies in conscious and skillful exercise of command authority through visualization, decision making and leadership...In unclear situations, informed intuition may help commanders make effective decisions by bridging gaps in information.¹⁰¹

Commanders, assisted by the staff, visualize the operation, describe it in terms of intent and guidance, and direct the actions of subordinates within their intent.¹⁰²

The Operational Frame

In his monograph, *Systemic Operational Design: Epistemological Bumpf or a Guidepost For Contemporary Operational Design*, LTC L.C. Dalton eloquently captures the process that occurs during Operational Framing that enables planning:

¹⁰⁰Shimon Naveh, *Systemic Operational Design –Update*, Operational Command Seminar Reference Book, (Ft. Leavenworth, KS: 16-26 January 2007) Tab D.

¹⁰¹FM 3-0, Operations (Washington D.C.: Department of Defense, 2001) 5-1 - 5-2.

¹⁰²Ibid., 5-1.

In order to commence planning, operational designers must first construct a hypothetical framework that rationalizes the complexity of the system and expresses a design as form and logic. This hypothetical framework and design provides the boundaries and logic necessary to enable planning.¹⁰³

In essence, what LTC Dalton explains is that SOD frames the problem and embeds potential solutions to the problem in that frame. The ultimate goal of the Operational Frame is to establish conditions for learning through exploration of tensions within the system.

In the example employed in this narrative, the problem is that the rise in power of the non-state actor, who employs terrorism and insurgency theory to achieve its ends, undermines the rule of law. The System Frame and Rival as Rationale discourse generate the hypothetical framework that rationalizes the complexity of the problem. To summarize, the Rival employs insurgency theory at the Operational level to translate Mass generated at the tactical level into strategic effects. Because the Rival's ultimate aim is political in nature and it utilizes illegal means to realize the aim, the rise in power of the Rival undermines the rule of law.

The Command as Rationale and Logistics as Rationale discourses set the boundaries for potential solutions to the problem. These boundaries are functions of the logic of the system set in time and space. The logic of the system, resources, and most importantly, political will are constraints on potential solutions. In the example in the narrative, the logic of the system dictates that any potential solution to the problem must inherently support the rule of law. Additionally, there exists a range of short-term actions that will further illuminate the nature of the problem while simultaneously alleviating political pressure to act. The reduction in political pressure generates time for the implementation of long-term solutions. Further, the logic of the system dictates the long-term solutions to the problem be environmental in nature. The ultimate form of the long-term actions can only be determined through the iterative process of learning through action.

¹⁰³L.C. Dalton, LTC, *Systemic Operational Design: Epistemological Bump for a Guidepost For Contemporary Operational Design*, (Ft. Leavenworth: CGSC, 2006) 31.

Dr Naveh emphasizes the fact that “Design and Planning are complementary.”¹⁰⁴ He explains, “Design is about sense making and learning, while planning is about action and the use of existing knowledge.”¹⁰⁵ By providing knowledge to the staff, in the form of the design for the operation, the Commander enables planning. Actions conceived during the planning process translate into additional knowledge during execution. This additional knowledge, in turn, feeds back into the design process. This iterative process ensures learning through action. In this manner, the Commander uses the design generated by SOD to inform the planning process as articulated by Joint and Army doctrine. Through the decision to use SOD to create the design, the Commander acknowledges his information is incomplete and he cannot impose his will on the system. Rather, he hopes to create conditions that are conducive to learning so that he can exploit knowledge for the betterment of the ultimate campaign and problem resolution.

The Elements of Operational Design

In his monograph *Conceptual Transformation of the Contemporary Operational Environment*, MAJ Wesley R. Odum Jr. explains how the Elements of Operational design work by demonstrating that they rely on reverse planning to assist commanders and staffs in visualizing, describing, and directing operations.¹⁰⁶ “This process begins by linking the political dimension of the operating environment with the first element of operational design.”¹⁰⁷ He describes how this reverse planning process continues until it terminates at the tactical level. “The establishment of certain military conditions is supposed to create the desired endstate through a causality relationship. Commander’s extend that same causality linkage downward

¹⁰⁴Comment by Shimon Naveh during Operational Command Seminar (Ft. Leavenworth, 16 January 2007).

¹⁰⁵Shimon Naveh, *Systemic Operational Design –Update*, Operational Command Seminar Reference Book, (Ft. Leavenworth, KS: 16-26 January 2007) Tab D.

¹⁰⁶MAJ Wesley R. Odum Jr., *Conceptual Transformation for the Contemporary Operational Environment*, (Ft. Leavenworth: CGSC, 2003) 14-19.

¹⁰⁷*Ibid.*, 14.

until it translates into tactical missions via task and purpose relationships.”¹⁰⁸ MAJ Odum’s description of how the Elements of Operational Design work is an accurate portrayal of how a Commander employs them to inform the planning process.

In her monograph, *Systemic Operational Design (SOD): Gaining and Maintaining the Cognitive Initiative*, MAJ Ketti C. Davidson critiques current planning doctrine:

Traditional problem-solving models are deterministic, ends-driven processes. The starting point for both the Joint Operation Planning and Execution System and the Military Decision-Making Process is a specific end-state based on a clear understanding of the problem. Upon receipt of a mission, commanders form their initial situational understanding using their experience, judgment, and initial staff inputs. From this, they develop an initial picture of the desired end-state and a construct for how to reach it.¹⁰⁹

At the heart of the critique is the fact that the military uses decision models to conduct its planning. These models are not well suited to a human environment, an open system. In an environment involving human interaction, problems are typically ill-defined and, therefore, impede any clear understanding of the problem. This fact unhinges any planning or decision process that presumes clear understanding from the outset. MAJ Davidson highlights the point that current doctrinal approaches to planning rely on reverse planning and causality. “The staff, in accordance with a systematic rational approach, develops a number of alternatives to achieve that specified end-state. The Commander selects the most efficient means of achieving his end-state from the alternatives presented to him.”¹¹⁰ In this sense, the Commander’s application of Operational Art rests in his ability to select the better of two or three existing templates to solve a problem. Taken to its theoretical extreme, this approach leads to a war on terrorism, an Operation against the Taliban Regime and an Operation against Saddam Hussein’s Regime; it does not lead to questions that ask if there a better alternative to solving this problem than war.

¹⁰⁸Ibid.

¹⁰⁹MAJ Ketti C. Davidson, *Systemic Operational Design (SOD): Gaining and Maintaining the Cognitive Initiative*, (Ft. Leavenworth: CGSC, 2006) 10.

¹¹⁰Ibid., 10-11.

There is an apparent contradiction in Army doctrine with respect to reverse planning. Field Manual 3-0 advocates reverse planning when it applies the Elements of Operational Design. The contradiction is in how Field Manual 5-0 qualifies when reverse planning is appropriate. “To plan effectively in reverse, Commanders require a clear and relatively permanent goal...Consequently, effective reverse planning is possible only in relatively predictable situations.”¹¹¹ It is clear that Field Manual 3-0 intends the Elements of Operational Design to apply to complex situations, precisely when Field Manual 5-0 explains reverse planning should be avoided.

In his article, “Emerging Doctrine and the Ethics of Warfare,” Dr. Timothy L. Challans, of the School of Advanced Military Studies, weighs in on the issue of causality in US doctrine. He describes how the concept entered into military thought, “The heavy focus on the idea of an effect quite naturally moved some people to think of the metaphysical correlate to an *effect*-that of a *cause*. So, military operations began to be thought of as a chain of events, chains of cause and effect.”¹¹² With this line of thinking, according to Dr. Challans, the military is “attempting to cause effects outside the realm of the physical world; they are trying to bring effects about in the realm of human activity.”¹¹³ He concludes that causation is not the proper concept when dealing with human activity. “One simply cannot cause another person to act a certain way; people act for reasons, not causes.”¹¹⁴

In the example presented in the narrative, the application of the Elements of Operational Design to the intent outlined in the Strategic Directive resulted in a declaration of war against terrorism. This declaration assumes it is possible to impose your will on the global geopolitical

¹¹¹FM 5-0, Army Planning and Orders Production (Washington D.C.: Department of Defense, 2005) 1-24.

¹¹²Timothy L. Challans, Ph.D., “Emerging Doctrine and the Ethics of Warfare,” presented to the Joint Services Conference on Professional Ethics (JSCOPE); [Article Online]; Available from <http://www.usafa.af.mil/jscope/JSCOPE06/Challans06.html>; Accessed 7 MAR 07; 3.

¹¹³Ibid.

¹¹⁴Ibid., 4.

environment. Significantly, as events and feedback from the environment proved, this assumption is invalid. To date, Commanders and planners have not adjusted their fundamental approach to the problem. MAJ Davidson provides insight as to why this is that case, “The current decision-making processes are counter-intuitive, mechanistic, and integrate new information too slowly. These problems allow new threats to act more quickly than the friendly forces can analyze, plan, and effectively respond.”¹¹⁵

Analysis

In his Operational Command Seminar, Dr. Naveh stresses the point that Systemic Operational Design is a Commanders tool. The Operational Commander must create the framework for the operation.¹¹⁶ Having demonstrated how the Commander uses SOD to inform the planning process, it is appropriate to investigate the characteristics required of a Commander to practice SOD. Dr Naveh characterizes Generalsip as a Mental System, the Rhomboid Concept of Me’tis.¹¹⁷ In the context applied by Dr. Naveh, Me’tis is balance. In his model, Dr. Naveh holds four personality traits in delicate balance under the concept of Me’tis. They are *Modesty*, *Skepticism*, *Idealism* and *Heresy*.¹¹⁸ In the context of SOD, *Modesty* is represented by discourse and learning. The Commander does not assume he can know object reality, therefore, he continually seeks knowledge through discourse and learning. *Skepticism* is the process by which the commander questions existing templates. The Skeptic maps unexplored cognitive territory. At times, the Commander must assume the role of idealist. Under *Idealism*, the Commander defends existing templates. As a Heretic, the Commander employs *Heresy* to prove that commonly held conceptions are incorrect.¹¹⁹ The delicate balance of these characteristics in one

¹¹⁵Davidson, 16.

¹¹⁶Shimon Naveh, *Systemic Operational Design –Update*, Operational Command Seminar Reference Book, (Ft. Leavenworth, KS: 16-26 January 2007) Tab D.

¹¹⁷Ibid., Tab D.

¹¹⁸Ibid., Tab D.

¹¹⁹Ibid., Tab D.

personality is very rare. Commanders must work first to display these characteristics, then to maintain balance between them. Therein lay the art of command and genius.

CONCLUSIONS AND RECOMMENDATIONS

Answering the Primary Research Question

The purpose of this monograph was to introduce the uninformed reader to SOD and demonstrate the methodology's potential as a replacement in doctrine for the Elements of Operational Design. The narrative generated by applying SOD to the Global War on Terrorism accomplishes this task. Two principle benefits to using the Global War on Terrorism as a vehicle to explore SOD are the abundance and breadth of material available on the subject, and the highly complex nature of the problem. The principle research question is: Given the failure of the Elements of Operational Design to produce a strategic victory, are they still relevant in the age of globalization? There are two secondary research questions: (1) Is Mass a valid principle of war on the 21st century battlefield? (2) Is terrorism a crime or an act of war? This section will answer these questions in turn and conclude by offering recommendations for future research.

Why SOD?

As demonstrated throughout the narrative, SOD is a methodology with much promise. It enables Commanders to rationalize inherently complex situations and develop solutions within the logic of the problem as framed. If, after inquiry into the problem, the Commander learns the frame is incorrect, he is encouraged to re-frame the problem based on his new understanding. SOD enables moral inquiry, while the Elements of Operational Design relegate such questions to the Rules of Engagement Annex. SOD encourages and enables a Joint and Interagency approach at the operational level. SOD does not rely on causality or assumptions to generate solutions. Finally, SOD is an inherently flexible process; the iterative cycle of learning through action generates agility and freedom of action at the operational level. **Recommendation: Implement**

Systemic Operational Design as the process for developing a design at the operational level of war.

The Efficacy of the Elements of Operational Design

The principle research question asks, if the Elements of Operational Design are still relevant. The simple answer to this question is that they are, albeit not as currently outlined in doctrine. As a bridge between tactical tasks and strategic objectives, they fail in every sense. Their utility lies in the fact that they provide a common language for describing the environment and employment of military force at the operational level. Joint and Army doctrine inculcate this language at every level; to abandon it outright is not reasonable. **Recommendation: Doctrine must separate the terms of the language from the concept that the terms constitute a process for developing a design.**

Mass on the 21st Century Battlefield

The Principle of Mass is a descriptive term that is dynamic in nature and manifests in various forms. Chapter two outlines how conventional and unconventional forces seek to achieve Mass on the battlefield. Examining the Principle of Mass through the conceptual lens of the Instruments of National Power highlights both its dynamic nature and its continued utility for describing successful operations. The description of the utility of the Principles of War in FM 3-0 (Draft) is insightful, “Applied to the study of past campaigns, major operations, battles, and engagements, the principles of war are powerful analysis tools.”¹²⁰ In addition to this list, the Principles of War are powerful conceptual tools to drive a SOD discourse. **Recommendation: Retain the Principles of War as currently outlined in doctrine.**

¹²⁰FM 3-0, Operations (DRAFT) (Washington D.C.: Department of Defense, 2006) A-1.

The Proper Paradigm for Terrorism

As discussed in chapter three and four, combating terrorism under a criminal act paradigm has numerous benefits. Most importantly, it supports the rule of law, which strengthens the sovereignty of nations and denies terrorist organizations legitimacy. Additionally, the terrorism as crime paradigm enables a focus on fundamentally constructive acts (aid programs) versus destructive acts (questionable both legally and morally) required when operating under a terrorism as war paradigm. **Recommendation: Initiate a multi-lateral counterterrorism program that operates under the terrorism as crime paradigm. This program is a logical long-term replacement for the Global War on Terrorism.** This recommendation requires a new definition of terrorism in international law.

Suggestions for Further Research

A decision to introduce Systemic Operational Design as a doctrinal process carries significant implications; therefore, further study of SOD is prudent. Suggested areas for further research include: How to integrate SOD and Dr. Naveh's concept of Me'tis into the Officer Education System? Is SOD compatible with the Joint Operations Planning Process, Military Decision Making Process, and the Marine Corps Planning Process? Can SOD be employed in a Multi-National staff?

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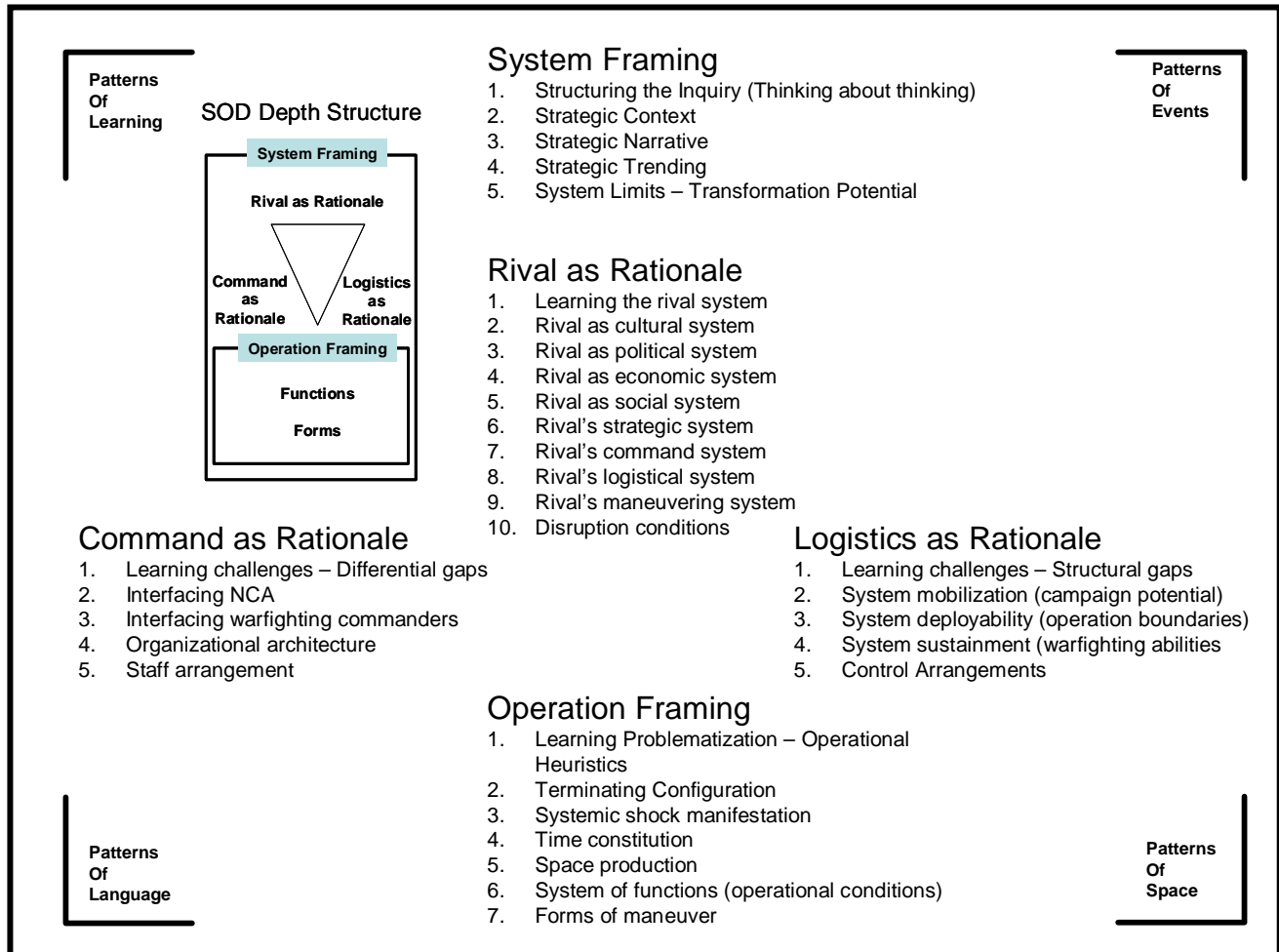
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APPENDIX 1

Systemic Operational Design¹²¹



¹²¹Shimon Naveh, *Systemic Operational Design –Update*, Operational Command Seminar Reference Book, (Ft. Leavenworth, KS: 16-26 January 2007) Tab D.